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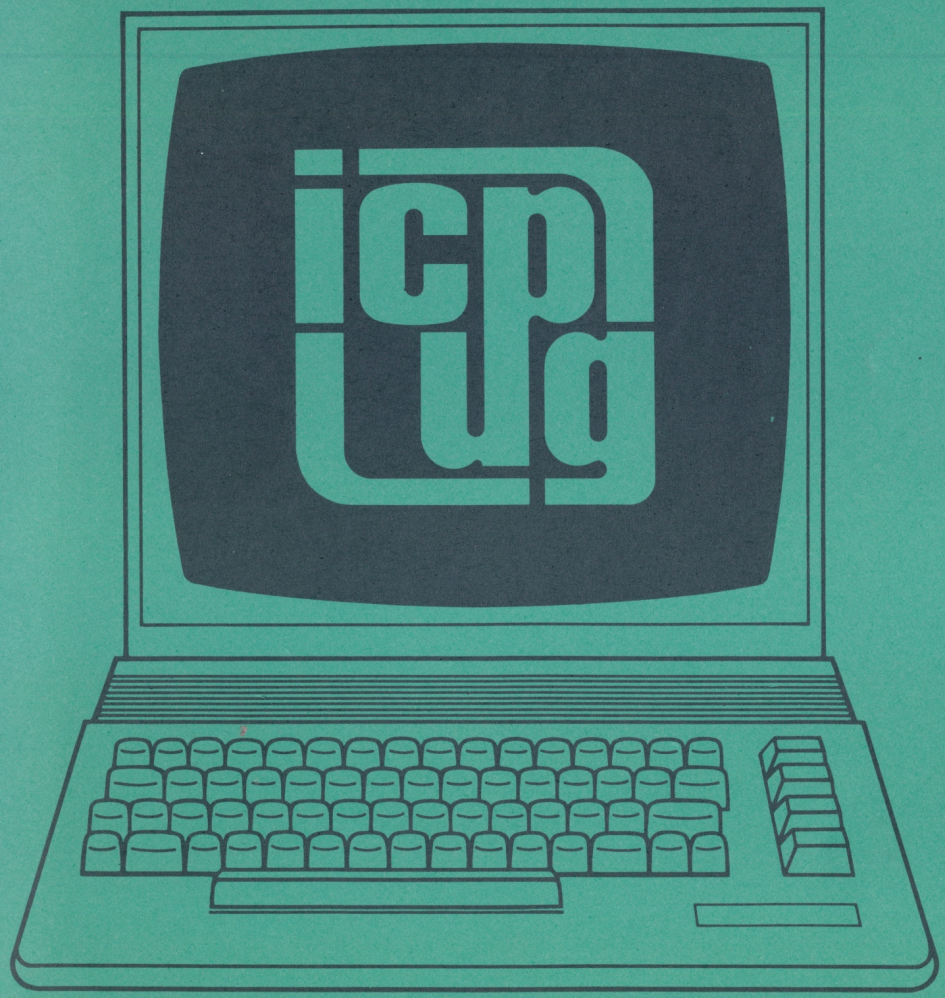

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icpug newsletter

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EDITORIAL

Just one week ago, I was worried that there was only going to be enough material for a very short issue. However, during the week, my postman has been positively labouring under the load of submissions. The end result is a bumper edition, so bumper in fact that several articles have had to be left out. (Don't worry, the articles that get held over from one issue have top priority in the next.) Another issue was raised by this influx; that of duplication. In your enthusiasm, several of you have submitted product reviews. This is really nice, unfortunately the very same products were also reviewed by somebody else. You can now see the problem. Please, to save yourself a lot of wasted effort, check with me before writing a review. The first person to confirm a review with me always has the guarantee of preference.

As I mentioned in the last issue, we were hoping to start producing the Journal with an Amiga and Protext. Sadly, due to a variety of factors this has not happened. I have the Amiga, but the editorial copy of Protext is apparently hiding somewhere within Her Majesty's postal system. This issue then is produced once again with Vizawrite Classic and a C128. Maybe next time...

ARexx 1.1

I received through the post this week the Version 1.1 update to ARexx, the Amiga scripting language with interprocess communication. According to the accompanying blurb it is now four times faster, and features a variety of bug fixes and enhancements. I haven't had the chance to install it on my system yet, but I shall provide a report when I do. The cost of the update is $5 (payable retrospectively). If you don't pay up, you don't get any more support. I have been sending in registration cards for everything I bought, hardware and software since 1983. So far this is the only response I have ever had from any company. Considering this update came effectively unsolicited from the U.S., Bill Hawes will get a vote of thanks as well as my money.

New lamps for old

Changing your computer can be almost as stressful as moving house. Let me give you some insight into the saga of my A2000. With the leakage of news about WB1.4 and the Enhanced Chip Set, I envisioned that the expansion path for my A1000 would soon be very limited. So I proposed to sell it, and my trusty Amstard 1512 and purchase an A2000 with Hard Drive.

Diamond Computers of Southampton were at the time promoting a trade-in

offer on A2000 systems. Plus I could buy back the 1000 for around £50. Excellent. I was then able to sell the A1000 to a deserving cause for a reasonable sum. Within two working days of placing the order, the machine arrived. I checked it, it worked; but oh dear there was only one manual, AmigaBasic (a language which I take pains to avoid). I phoned Mike Brown at Diamond. "Yes, a manual will be in the post today." Eight weeks, two letters, four phone calls (and four broken promises) later, still no manual. My big mistake - in hindsight - was paying them. Maybe if I had withheld my cheque the manual would have arrived. What can I say? I am extremely disappointed with their service, and can only say to members 'do not buy from Diamond, or if you must, make sure you have your entire order and that it is fully functional before parting with any money'.

Quantum Prodrive

The hard drive is a 40MB Quantum Prodrive, mounted on a GVP auto-booting SCSI controller. This was purchased from the Micron Computer Centre, and that was a saga in itself. The drive was ordered at the same time as the system unit, however it did not arrive until six weeks later. The reasons for this appear to be that Micron was over-ambitious in their bulk order, the bank was over-cautious in their funding of this order and GVP were overdue in their delivery. During that time, the sale of my Amstard to a neighbour went sour courtesy of a very unhelpful bank manager. Since my neighour was planning to start an Open University course, and pleaded with me, I let him pay me for it in installments.

This presented me with the problem of how to pay for the hard drive. I phoned Dave Barber at Micron and explained my predicament. Dave was very understanding and generously allowed me to pay him also in installments.

The Quantum Prodrive is claimed to be the fastest commercial hard disk on the market; built-in intelligent hardware cacheing gives it a rated average access time of 11ms track to track. This is further enhanced by the GVP SCSI controller which provides autobooting under kickstart 1.3, and DMA data transfer into system memory.

The cacheing system provides for very fast program loading times - one rotation of the disk reads the track into cache, this is then DMA'd into memory as required. The real work comes when the unit is required to perform other tasks. How about database access? (this to me is a more relevant test, since this is the kind of activity it will spend most time performing.) I devised a simple but fairly cruel test: Take one large Superbase file and export it in Logistix format. This involves seeking to the end of the file, reading one field

from the last record, write it, get the previous record read the field etc., then back to the last record for the second field and so on. It is a very disk intensive - and random access - activity. The Superbase file status was as follows:

```
File DF1:DATA/CBMUSA
Current Index: Lastname
File is valid                Record Count: 2691
Password: No                 Field Count : 8
Privileges: All              Index Count : 3
Block Size: 64 bytes         File Size   : 256064 bytes
```

The exported Logistix file was 528247 bytes.

Timings for the A2000, A1000 with 20MB Supradrive (+2MB fast RAM) and a Compaq 386/20 follow. Superbase Professional V3.01 was used on the Amiga, and Superbase 4 Windows (Alpha 36) on the PC. The same name & address data file was used in each test, which was run from a small DML program. Times are given in hours:minutes:seconds.

	Floppies	RAM disk	Hard drive
Compaq 386/20	20:02	n/a	1:58
A1000	55:02	05:57	07:35
A2000	1:05:00	n/a	06:03

For the Amigas, in both cases Workbench 1.3 was installed and the disks formatted with the fast filing system. All timings were for like to like, ie floppy to floppy, or RAM: to RAM: The floppy time on the PC is based on 1.2MB 5.25" to 1.44MB 3.5" diskettes.

RAM disk times were not available for the A2000, since with only 1MB, there was not sufficient space to hold both source and destination files. Since without fast memory, hard disk DMA can actually slow your system down (the hard drive fights the blitter for bus cycles), I imagine these figures will further improve once I expand my memory. As it stands, the hard drive was only 6 seconds slower than the A1000 RAM disk, and almost 1.5 minutes faster than the Supradrive. The floppy to floppy test showed the A2000 to be 10 minutes slower. The Compaq figures were included to show what can be achieved in the business world with money (and 33MHz PCs are starting to appear on the market now...)

CHAIRMAN'S CHATTER

by John Bickerstaff

Last issue I talked about the summer being with us, since the June Commodore Show was over and we were preparing for the autumn shows. Consequently you would expect on reading this subsequent issue that summer would be nearly over! I was wrong! Summer is a long sunny one this year and we are still enjoying really beautiful sunshine on our week away in Dorset. Here's hoping you will be or have been just as fortunate with your holiday.

The ICPUG Annual General Meeting

This event went smoothly and some thirty five members attended the event. The report and accounts - which were circulated to you all with a previous edition of the journal - were approved together with the appointment of the Auditors for 1989. The subscription for 1990 was set at £16 for U.K. members with appropriate extras to cover postages for overseas members. Most members of the 1988 committee were re-elected and the few who retired were thanked from the chair for the help they had given during their term in office. The meeting closed with a vote of thanks from the floor to the committee for their work over the past year.

It's a bind

Quite a few members have asked if we could provide a binder for the newsletter, as they were not able to locate a High Street supplier who could provide a suitable one. We understand that commercially 100 binders would be the minimum order needed for a special production run. In order that we may consider making a bulk order on behalf of members please indicate your support by writing to me (by the end of August) confirming your intention to purchase a binder through ICPUG. If enough confirmatory replies are received we will place a special order for members. We hope these special binders would be available by the end of the year.

A500 and the A590 Hard Disk Drive

The 20MB Hard Disk drive and un-populated 2MB RAM card unit should soon be available at the sensible price of £399 retail. This item has already been reviewed by one 'Amiga' magazine with considerable enthusiasm. It looks very

neat and is styled to look like a natural extension to the A500. It will autoboot for those of you with 1.3 Kickstart ROMs. Additional hard drives may be attached to the SCSI interface which is located at the rear of the unit. The RAM card may be populated to 2MB with 1MB CMOS chips, although at the price quoted these chips are not included. For those of you who can afford the starting price this would seem a good step towards increasing the power of your A500.

WordPerfect - not so PERFECT

Many members have enquired about the availability of word processors for the Amiga series of machines. Now the choice is really a very personal matter but there is one program that seems to cover the most complex needs of members even to columns, mathematical functions and page numbering - WordPerfect 4.1. However, news has just arrived that the WordPerfect Corporation will no longer be updating their program to version 5.0 - as they have done for their PC edition. Somehow their marketing information indicates that there is insufficient demand from the world of the Amiga to allow the corporation to spend out on upgrading the Amiga version. We understand that there will continue to be support by technical staff for holders of the 4.1 edition.

However, I must report that there is at least one bug in the 4.1 edition that WordPerfect are not prepared to correct, in fact they advised me they do not consider it to be a bug. This is that on short pieces of text (up to about two pages) it is not possible to use the slider to return to the start of text. It allows you to move down to the end of text but not back again, you need to tell it to go to line one! It works perfectly for longer text but not on short pieces and - well you all know that I do not write at great length, I leave such matters to the more chatty contributors to the newsletter. Still I think the program is good and will be most likely to suit the more demanding of word processors.

PC TIPS (MONKEYING AROUND WITH MSDOS)

by Brian Grainger

In the May/June issue the Editor provided some figures showing that 5% of members at that time had PC Compatibles. On that basis the newsletter should have about 5 pages of PC related information per issue. I've decided to start things off.

It seems to me that while there are many people who like to poke around the Commodore operating systems and change them to their liking there are not so many who do the same to MSDOS. The basic contents of this article are not original. The idea came from the journal of the PC User Group. They do not have many ideas so it deserves a wider audience!

One of the most fundamental commands in any disk operating system is that to produce a listing of what is on the disk. MSDOS implements this by the DIR command which is internal to MSDOS. That is it forms part of the operating system that is booted into memory at startup and stays there permanently. Such internal commands have their code in the file COMMAND.COM and it is this file which stays permanently in memory. It is a pity that there is not something similar in AmigaDOS as internal commands operate instantly rather than having to wait for them to load from disk. Admittedly AmigaDOS 1.3 allows commands to be made resident but this process takes a lot longer than loading COMMAND.COM.

Like the AmigaDOS 'LIST' command the MSDOS 'DIR' command lists each file name with its date and time attributes on a separate line. This is OK until a directory has many files in it and then the screen is full in no time and the file you are looking for has disappeared from the top of the screen. One solution is to use the pause option (DIR /P <directory>) which pauses when the screen is full and does not continue until a key is pressed. This is OK but the first thing one notices when using DIR is that a lot of the screen is empty. MSDOS only allows 8 characters in the filename plus a 3 character extension. The name and attributes only take up half the screen. Likewise if the directory is sent to the printer (DIR <directory> > PRN) only the left half of the page is used. Can we not use this spare space?

One can use the 'wide' option (DIR /W <directory>) which will print four filenames on each line. However, to do this the date and time attributes are not shown. Is there a way that will make more efficient use of the display space without losing any information? The answer is to hack the operating system. As it stands the DIR command only takes half the screen to print each line of file information. It should be possible to display two files on each line.

In fact it is very easy to do, when you know how, and it involves modifying the COMMAND.COM file. Somewhere in the file the following code exists:

```
A8 01 B0 01 74 02 B0 05
```

All that is required is to change the 01 following B0 to 02. Fortunately MSDOS, unlike AmigaDOS, includes a monitor program (DEBUG) which will allow us to make the change. First of all make a copy of your MSDOS disk and work on the copy. This ensures errors are not fatal. Now with the MSDOS disk copy in drive A: and looking at the root directory of drive A: type:

```
DEBUG COMMAND.COM
```

This has the effect of loading the file COMMAND.COM into memory starting at an offset of 0100 from the address given in the CS register. We must use the DEBUG search command (-s) to locate the appropriate code and this can be done as follows:

```
-scs:0100 9000 a8 01 b0 01 74 02 b0 05
```

This is telling DEBUG to search the memory from offset 0100 from the address in CS to offset 9000 for the bytes given. The value returned will be of the form:

```
yyyy:xxxx
```

yyyy represents the value of cs and xxxx represents the offset address for the start of the code. We now use the DEBUG edit command (-e) to change the memory. Type:

```
-e cs:xxxx
```

where 'xxxx' is the offset returned by the search command. The first byte of code (a8) will now be echoed to the screen. Press <space> as we do not wish to change this byte and the next byte (01) will be displayed. Continue pressing <space> until the next '01' byte is displayed. Now type 02 and press <space>. The memory has now been changed and all that remains is to save the revised memory back to disk as COMMAND.COM. This is done with the DEBUG write command (-w). Type:

```
-w
```


The appropriate block of memory will be saved provided the registers have not been changed. COMMAND.COM will be updated and have a different date and time stamp from that on the original MSDOS disk.

All that remains is to boot up with this modified DOS disk (press CTRL, ALT, DEL together) and give a DIR command. You should find a listing with two files per line and all date and time stamping shown.

I hope this tip has proved instructive, not only in improving the DOS command, but also in showing how DEBUG can be used to hack around the MSDOS system to give us what we want rather than what Microsoft are prepared to give us. Having started the ball rolling let's see some more PC tips from the 5% of membership with Commodore PCs.

LIBRARY LORE

by Joe Griffin

For all libraries, please always use the most recent Journal for the details of copiers.

There has been a slight reallocation of duties within the 64 library as, after three years, Peter Crowder has given up his position as a copier. He wants to concentrate on PC 360K copying (plus playing with the Amiga which he bought from Tim Arnot).

The current copiers are listed on the back page of this newsletter. Please use the copier who deals with the first letter of your surname. Members requiring tape copies should deal exclusively with Joe Quinten who also copies Ham Radio disks for members with names in the range A - M. Members N - Z should apply to the librarian (David Miller) for the Ham Radio disks.

Could I remind members about the rules on packaging and return postage. In particular could I remind overseas members to include sufficient IRC's with their request. Three IRC's are usually sufficient for postage of two disks within Europe (provided your packaging is not too heavy) but for outside Europe it seems that five IRC's is more appropriate. Please remember that whatever your post office charges you for IRC's, we can only redeem them for 23 pence.

Also, PLEASE if you write to an officer of ICPUG then you should include an SAE or return postage if you want a reply.

TEXAS TALES

by Betty Clay

Since the last column, you have had a great time at the Commodore Show in London. I have also had a great time. We have moved to a new house, and have enjoyed visits from several friends, including Joe Griffin and his brother, Chris. The visit was a delight. Richard and I had a wonderful time. I shall rely on Joe to give you a report of the visit, though.

DevCon

DevCon is the most exciting news from the States these days. DevCon is the annual conference for Amiga developers, is sponsored by Commodore, and is held annually at a different city. There is a mindset in this country that successful meetings can only be held in one of the big cities on the east or west coast. This year, they chose San Francisco. Whether it was the location or the programme, this DevCon was most certainly successful. We all know that Amiga developers are not quiet when they are displeased, and that they are not extremely easy to please. We are now one week past DevCon and I have not heard anyone complain. That just *has* to be success. Almost all of the sessions at DevCon dealt with the things that will be new in version 1.4 of the system software. The session leaders indicated that it might be ready for release by the end of this year. Most of us feel that it will be next summer.

The proceedings of DevCon filled more than seven hundred pages. While I was not able to attend the conference, a friend has permitted me to borrow the notes for a few days. I have not begun to digest all of that information, but I have not let that stop me from writing a companion article to this in which I have summarised what I have been able to learn in two days. The changes will be significant, probably the greatest change we have seen in the Amiga since its beginning. The most beautiful part is, current software will still run. But more of that in the article devoted to it.

Obese Agnus

Our networks are full of comments and questions about the new Agnus chip. They have now been released for sale, and they are being sold as soon as they arrive in the stores. Obese Agnus allows you 1MB of chip ram, and this is terribly important to those using the Amiga for professional work in graphics, among other things. Most of us feel that the new Agnus should have been

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made to address 2MB of chip ram, but the current increase is most welcome.

Getting this new chip installed is not easy. Most dealers have the correct tools, and it is always recommended that people take their computers in and get the dealer to install the new chip. Most owners do not wish to be without their machines and do not want to pay the fee to have this installation done for them. For that reason, our nets are full of advice on the best way to do the installation at home. The tool needed for pulling the current Agnus from its socket is rather expensive. I've been seeing quotes of about $30 for the tool, and it is not readily available. There is danger in removing this chip without the tool, because the socket is easily broken. Replacing the socket could be quite a job. However, some people are reporting that they have removed the Agnus safely by placing a bent paper clip under each edge and pulling up with steady pressure. Others have reported success with thin screwdrivers. Yet others have reported broken sockets using either of these methods! The method that is safest for the socket, but the most work for the installer, is to remove the motherboard from the computer and push the Agnus out from the bottom. It seems that there are two very small holes under the Agnus, put there for that very purpose. Pushing up on the pins through those little holes removes the chip with the smallest possible stress on that fragile socket. Once the old chip is removed, no problems have been reported with pushing the new one in.

Just getting the new Agnus in place does not complete the job, however. The exact instructions are included with the chip, so I won't give the minute details here, but after the chip is in place, it is still necessary to move a jumper and to cut a track on the motherboard before the Amiga can recognize the extra chip memory. Obviously, this not a task for the technically untrained nor for the faint of heart. I still think I will take my machine to the dealer and have it installed for me, but not until I have need of more chip ram and have the $100-150 to spare for that purpose. The new Agnus, and the new Denise as well, will be necessary before we can take advantage of 1.4.

Those who are buying A2000 and A2500 machines now will already have the Obese Agnus installed when they purchase the machines. At least, all of those currently being shipped are said to have the new chips installed. In fact, we are told that rather large numbers of the machines sold over the past six months have the new Agnus, but have not had the jumpers moved and the tracks cut. If you have a recently purchased machine, you can check it out. The old Agnus had a number that ended in 0; the obese one ends with 2.

Obese Agnus for the A1000?

From the beginning, Commodore has told us that the A1000 will not be able to take advantage of the new features to be offered by the new Agnus and the upcoming new Denise (ECS) chip set. They have told us that the circuitry on the A1000 motherboard does not allow for access to these features, and that the A500 and A2000 were made so that they would be able to accept the chips. It was for this reason that they made special offers to those who wanted to trade up from the A1000 to the A2000 when the 2000 was first released.

Now, one of our Amigans tells us that he can make a daughterboard that will do the job. His name is Gregory Tibbs, and he is an engineer, working at Wright-Patterson Air Force Base. He seems to be something of a troubleshooter there, dealing with problems throughout the computer area, and it is my impression that he is very knowledgeable. I know him through CompuServe only.

Greg tells me that his board will be called 1000 Lives, and that it will be a replacement for the Writeable Control Store, or Kickstart RAM. There will be a clock on the board, the same one used on the A500 and A2000. He says that Commodore says the new Agnus cannot be used in the A1000 because the present motherboard does not allow the new Agnus to use the chip RAM. He is getting around that problem by putting 1 megabyte of RAM on his board and connecting that to the custom chips via a bus that is isolated from the motherboard's interchip data bus, and is using this new RAM for his daughterboard. He is doing this in a manner that lets him use the original RAM as fast memory, so that people who use his motherboard will be gaining a megabyte of memory, in addition to getting the new display modes and other advantages of 1 meg of chip RAM:

Some other features of this board include a socket into which the ROM can be inserted. Should Commodore decide to use 512K ROMs in the future, his board can still handle that. He has also included a video slot so that owners of the A1000 can use graphics cards such as the Flicker Fixer.

Greg has finished the design of the board, has done the artwork for the printed circuit board, and is currently having the prototype made. He has enough parts to build three boards, and expects to be demonstrating one of them at AmiEXPO in Chicago on July 28.

This is an exciting development. I wish Greg well. Perhaps I shall have more news about this board next time. I'll try.

Network gleanings - Problems and solutions

Reading the messages on CompuServe and Usenet, I find a constant flow of questions from other participants. Answers usually come from many others. I like to keep some of these answers and to pass them along to those who don't have access to all of this information online. Here is a typical exchange that I read recently. I do not recall the name of the questioner, but the answer came from Andy Finkel at Commodore, and this exchange was on Usenet.

> Hi, this is the guy with the fried A2500 again. Well, I finally got a copy of
> 'hddisk.device', (all but the info file) but the hard drive still will not work
> when mounted...
> I doubt the info file could be the cause of it... Oh yeah, I even used the
> installation disk, and when I ran prep disk, I got a software

Oddly enough, your problem *is* caused by the hddisk.info file (or lack of one). That file is what Binddrivers uses to figure out which driver goes with which board. So put one in, and things should be better. (add a .info file called hddisk.info, of type TOOL with the following tooltype: PRODUCT=514/1 (case is important) and your hddisk should open.

> Is the controller bad? Is Commodore Bad? Or am I just cursed? Well, on
> the bright side, my grades should be signifigantly better now that I can't put
> as much time into programming. I think it is a curse. You went right to the
> correct answer, then dismissed it. That has *got* to be a curse of some
> sort :-)

Another interesting exchange involves fonts. About a year ago, we discovered that fonts made with the early versions of Calligrapher would reload the font each time the font was accessed, eventually running the Amiga out of any possible amount of memory. That has been fixed in later versions of Calligrapher. Here is a similar problem, though with an altogether different cause. The first message was posted by Chuck McManus:

>> In article <2111@pur-phy>, (Timothy Lee Meisenheimer) writes
>>> I use courier 13 (font) all the time ... Xoper ... shows the
>>> courier font ... listed THREE times...
>> In article <6561@cbmvax.UUCP> daveh@cbmvax.UUCP (Dave Haynie) remarks:
>> [Essentially that he uses fonts correctly in SetFont 2.5 so
>> that shouldn't be the cause.]
>> Many programs simply call OpenDiskFont() first which does not check the
>> in memory font lists and instead does just what it's name implies, opens
>> the font from disk.

The answer came from Dave Haynie of Commodore:

>Whoops! When I went to SetFont V2.5, I managed to reverse the opening
>order. So SetFont may actually account for one additional copy of a RAM
>font each time it's run, it would appear. By the time I finish typing
>this, V2.6 could have finished compiling. I can't account for the other
>copies, I don't believe, but you'll certainly want the new version.

I have not yet seen V. 2.6 of SetFont, but after reading this, I also want the correct version! When I get it, I will send it to Peter Miles as quickly as possible.

That's the whole tale from Texas for this time.

VIZAWRITE REVISITED

by Capt. W. Ritchie - Royal Signals

Well over a year ago I wrote in to ask if there were any fellow ICPUG members who would be willing to help solve a problem I was experiencing with Vizawrite Classic (VC) and a Citizen 120D printer. My letter actually appeared in the Jan/Feb 88 Edition of the magazine.

The problem I was experiencing at the time was one of emphasising, and in fact my main area of concern was the apparent inability of the printer to underline whilst using VC. I was, at that stage, using a Citizen 120D printer, with a standard Citizen (slide in) Commodore serial interface (referred to by Citizen as a Basic Interface Pack (BIP)) chained off my second Disk Drive. The most perplexing thing at the time was that the printer would successfully underline using a multitude of other word processor packages - including Vizawrite 64. The other factor causing confusion was that my efforts were not entirely unsuccessful, the printer was underlining, but at the same time it was jumping into upper case and garbling the odd character.

At the time of writing to ICPUG I was also corresponding with Viza Software, but apart from several basic suggestions, and an offer of a visit to their Offices with my printer (by letter from the great Kelvin Lacy himself!), they were unable to help any further. The inability to underline may seem trivial to some readers, but I was finding it a major problem, because much my work

needs a fair amount of underlining, and having laboured for hours over a lengthy document it's no joke having to get out a felt tip pen to finish it off!

I was almost driven to the point of switching to another wordprocessor package in order to resolve my difficulty, but as a fan of VC I was very reluctant to take such a drastic step. Even Superscript could not tempt me. Sorry Superscript users, but I was in no rush to swap the easy formatting of VC for embedded commands - despite the fact that I had previously enjoyed using Script Plus on a Plus/4. I was too far down the road (or rather up the learning curve) with VC to change.

My plea for help met with a number of responses, for which I was very grateful, but most pointed me in the obvious direction of specifying control codes in the format line, and using them rather than the standard VC CONTROL U command to switch the underlining on and off. Having already been down the control code path, I knew exactly which ASCII codes were required and had tried them without success - Escape (27),Hyphen (45),1 (49) for on, and (27),(45),0 (48) for off. Nothing new there - I had even used them on my first wordprocessor package - Script Plus. They were also successful from BASIC and with other wordprocessor packages. It appeared that nothing was wrong with my printer, and I was up against something of a brick wall.

Fortunately for me, one of the ICPUG members who came to my assistance appeared as determined as I was to get my printer under control whilst using VC - enter Eric Minshall. Eric over the period of about a year nibbled away at the problem as we exchanged letters and ideas about codes pseudo-vectors and secondary addresses. Mostly Eric's ideas I might add. At the time all our efforts were being directed at trying to solve the problem using the serial interface, but as the months dragged by, we both drew the same conclusion - we were, literally, up against the proverbial brick wall. There appeared to be some incompatibility between the VC CBM output and the Citizen interface cartridge which was resulting in a mis-translation of CBM ASCII into ASCII.

There was only one option left; and that was to try and use the 120D with a parallel interface connected to the user port and activated by the parallel output button in the printer route menu. I had been down that road once before, on the advice of Viza Software, without success, and my main concern about trying it again was one of cost. It would require the purchase another cable, plus a CITIZEN parallel interface - all on the off-chance that it might work this time around. Fortunately I was still in contact with a friend who owned a spare parallel interface, previously borrowed for my first attempt at the parallel connection, and after a swift phone call it was on its way to me in the post. I then took the plunge and invested in a cable which I purchased from

Datel Electronics at a cost of £12.00 - having decided to avoid the offer of Viza's so called low cost cable at £24.00!! Whilst I was in the process of procuring the necessary hardware, I had also posted my printer manual plus a formatted disk to Eric who had offered to knock up a printer profile. Finally the moment of truth arrived. I had the interface, the cable, and the profile (appropriately named CITIZEN) along with another typically detailed letter from Eric.

Everything connected, I booted up VC, selected profile load, loaded CITIZEN, and selected the parallel output on the printer route menu. Hardly able to contain myself any longer I keyed in several lines of text with some sections underlined using, CONTROL U, and went to print. "Hey presto success", I could hardly believe it after all that time! Initially I had a problem with the £ sign but that was soon resolved by setting the parallel interface switches to put the printer into Epson mode with UK character settings.

Being able to underline is not the only benefit of using the 120D with a parallel interface. I now have full control over the printer from within the VC software, whereas before whilst using the serial interface, the machine was to a greater or lesser degree emulating a Commodore printer. Now with the printer set up in Epson compatible mode I am able to use all the CONTROL keys within VC; as well as having the ability to exercise total control of the Characters and Lines Per Inch (CPI/LPI) - plus the other features in the printer set up page menu.

Solutions to problems, however, seldom come without some cost. I had to procure (on a permanent basis) a parallel interface, and am still faced, from time to time, with having to swap back to the serial interface to use other systems which do not have the software built in to enable the user port. Fortunately the friend who lent me the parallel interface for the test let me buy it at a very reasonable price. I find changing interfaces on the odd occasion is, however, no great hassle; and have now copied the CITIZEN profile onto my VC system disk which makes loading quicker following boot up.

VC is a commonly used word processor package, and the Citizen 120D is a popular, and currently very reasonably priced, printer. I would be very surprised if there is not someone else out there who is experiencing exactly the same type of problem. If any ICPUG member is going through the same loop, I would be delighted to hear from them; and I will be only to happy to let them have a copy of Eric's CITIZEN profile - either in printed form, or on disk if they care to send one (my address is: Capt W Ritchie, 21 Signal Regt, BFPO 42). My public thanks to everyone who wrote with offers of help - especially to Eric whose untiring efforts throughout 1988 finally put my underlining saga to bed.

OFFICIAL COMMODORE SHOW

by Janet Bickerstaff

This year's Commodore Show was held at the Novotel, London, from the 2nd to 4th June. The Friday and Sunday were exceptionally busy and broke the attendance records, but Saturday afternoon was unusually quiet. Maybe the England/Poland football match at Wembley had something to do with this!

Unfortunately a tube strike on the Thursday made it difficult for volunteers to get to the Novotel for set-up. One even walked from home, which took him over an hour. At the last minute we were given the opportunity to move from the small stand we had planned on the ground floor to a super stand on the first floor adjacent to the bar. Our new stand was 4m by 4m and open on three sides. Some of our stand equipment was already promised to Chris Wright of Bytes and Pieces, but the hotel kindly lent us a couple of tables and these were covered with cloths borrowed from my flower-arranging club.

As we were only planning for a small stand, I had kept the number of volunteers low, but sadly some of the people on that list let us down, so a very few of us had to work extremely hard and were in a state of collapse at the end of the Show. The Chairman had a bad throat infection and lost his voice, which he said was just as well for some people!

We took 160 memberships on the stand and many more people took away leaflets to fill in at home. They had spent all their money!

We were delighted to have Jim Butterfield over from Toronto again this year, and he did his share of dealing with the technical questions on the stand. He was suitably dressed for the occasion with a pair of Commodore braces, and a Diamond sweatshirt under his yellow shirt, which went with the ICPUG colours!

The Question and Answer Seminars after lunch each day were crowded with enthusiasts and we had a brilliant team to deal with their questions. As well as Jim Butterfield, the team included such people as Tim Arnot, Harry Broomhall, Jack Cohen, John Collins, Tom Cranstoun and also Dave Parkinson from Ariadne Software. Will Light was an excellent Master of Ceremonies and did a grand job with the roving microphone.

Although the questions were serious, there was a light hearted atmosphere. On the Friday, Jim Butterfield was late arriving at the Salon Bourg and was able to make a triumphal entry from the back of the hall. On Sunday a disembodied computer voice joined in the discussions when someone got their hands on an Amiga!

We had a good crowd around the ICPUG stand, often drawn by David

Annal's demo of the fable of the archer and the bird, which was running on one of the Amigas. It was entertaining for us to watch their faces at the end of the sequence!

The next show for ICPUG is the Personal Computer Show at Earl's Court from 27th September to 1st October, with set-up on Tuesday, 26th September. As members of the British Association of Computer Clubs we shall have a free stand in the club area. The re will be a Commodore show at the Novotel London from 17th to 19th November. Details are not yet available, but we hope to have a stand there as usual. We shall not be at the Computer Shopper show.

Commodore have introduced a range of leisure goods which were available at the Commodore Show in June. These range from Sports Shirts and Baseball Caps, Leather Belts and Calculators, right through to Commodore Bears and Ceramic Mugs. Details from:

JG Promotions & Marketing Ltd.
8 Brendon Street,
London W1H 5HE.
Telephone enquiry line 01 724 3970

RAFFLE PRIZE WINNERS

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Kickstart Guide	Amiga	Jim Kennedy	T.P. Edwards	630569
Word Wizard	C64	Will Light	D.M. Davies	633644
Robert Carrier	C64	"	P. Jeffery	614879

SEVEN-AND-A-HALF BITS (Left after reassembly!)

by Joe Griffin

Matters Arising

Firstly, a big thank-you to the various members who have sent me ROM dumps from their disk drives, or who have offered to provide me with a dump. Secondly, another thank you to those members who have dropped me a line of approval for this column (the '(of a bus??)' was an addition by Tim) [Remember the John Cleese '386 chips & 32 bits of a bus' Compaq ad? - Ed] or who have made suggestions, direct or indirect about what they would like to see in it.

In the last column, I was foolish enough to mention slowing down a PET listing, without actually telling you how to do it. For any 40 column PET, holding down the <RVS> key while a program is being listed (or any other output is being printed to the screen) will introduce a half-second delay between each line. On the 80 column PETs, this is achieved by holding down the <left-arrow> key (the one at the top left of the keyboard). On the C-64, the <control> key has the same function. Additionally on the 80 column machines, a listing can be paused by pressing the <colon/asterisk> key. The listing is resumed by pressing the <left-arrow> key or 3,6 or 9 on the upper row of keys. On BASIC 4 PETs (40 & 80 col) the display of a disk directory can be paused by pressing the space bar. Pressing it a second time resumes the display. So now you all know!

My means of identifying disk drives caused confusion for some people. The wording I used was 'The routine I use is essentially this:' and I then gave a line of BASIC. The line included a GET# statement. There are a few BASIC keywords which cannot be issued as direct mode commands, but only as instructions within a program. The main ones are GET, INPUT, GET# and INPUT# so that any attempt to type in the line given and press return would give the famous helpful response 'SYNTAX ERROR' - I know I'm VICE chairman, but a SIN tax! To help those who want to try the routine, we need a short program, thus:

```
10 AL=255:AH=255:REM reset vector hi-byte
20 OPEN 1,8,15:PRINT#1,"M-R"CHR$(AL)CHR$(AH)
30 GET#1,A$:A$=A$+CHR$(0):CLOSE 1
40 PRINT ASC(A$)
50 END
```


By altering the values of AL and AH in line 10, you will be able to look at various addresses in the disk drive ROM.

Peripheral Devices

One of the questions I am frequently asked is whether a particular disk drive or printer can be used in conjunction with a particular computer. When Commodore bought out the PET (but maybe not the original 'small keyboard' version) they chose to equip it with a bastardised form of the IEEE-488 bus. In simple terms, this bus has 8 data lines which each transmit one bit of a byte in parallel at the same time. Additionally, IEEE peripherals in general contain some level of intelligence (Commodore ones can be very 'thick' at times [but they sure know when you haven't made a backup! - Ed]). The main peripheral devices introduced with these machines were disk drives and printers. At that time Commodore were chasing the small business and advanced hobbyist markets and relatively expensive peripherals were the order of the day. When CBM entered the consumer markets with the VIC and C-64, they accepted that the expensive IEEE parallel devices would not sell and devised a 'Serial IEEE' bus. This uses IEEE level signals but has only a single data line; thus a byte is transmitted one bit at a time - hey presto, slow peripherals!

In general serial devices cannot be used on PETs. The one exception is the 700 (or B) series where a serial adapter has been produced by members of the Chicago B Users Group (C-BUG). In contrast parallel devices can be used with serial computers (Vic, 64, 128) if a suitable interface is used. I personally use a Brain-Box IEEE interface which fits into the cartridge port of my 128 and gives true parallel speed. An alternative which is probably now only available second hand is the Interpod which is a stand-alone box with serial input and parallel output. Its biggest disadvantage was that it worked at serial speed, that is SLOWLY. The other method of interfacing which I have used involved a similar system to the Interpod but with a far better interface - a PET! Mick Bignall of Microport developed 'Sipod' a serial to parallel interface which used a PET as the intelligence. A simple cable connected the serial port of the VIC/64/etc. to the User port of the PET. Software in the PET read signals from the user port and transferred them to the normal IEEE bus of the PET. It worked well and was cheap. The 64 saw only a standard serial device while the PET did all the clever stuff.

Types of Printer

As I have mentioned above the PET range used IEEE parallel printers. The disadvantages of this were mainly that Commodore's range was pretty basic and expensive. Fortunately a number of printer manufacturers provided optional IEEE interfaces for their products and indeed Epson made a 'PET' interface which did code conversion. When I set up my PET system, I chose an Epson FX-80 with IEEE card as this gave far more features than any CBM printer. An alternative route which many people chose was to buy a standard 'Centronics' printer and add an external interface to convert from IEEE to Centronics parallel. The Aculab interface was fairly common for this duty. It sat on the back of the PET and intercepted signals sent to device 4 (the normal printer address). These interfaces, whether internal to the printer, or external did not require any changes to the PET. It was also possible to drive a parallel printer directly from the User port of the PET, but this required special programming or a ROM modification inside the PET.

When the cheaper machines came along, Commodore introduced serial printers and a few manufacturers also produced printers with built-in CBM emulation, so these were fully 'plug compatible'. However, with these computers it also became easier to intercept output vectors and diversion of printer output to the user port became a simple matter. Various manufacturers produced simple cables to connect from the user port to a centronics port. It is worth remembering that one of the two standard methods of wiring these interfaces is not fully compatible with the user port software built into such programs as SuperScript and Superbase. (I had to take a soldering iron to my Stack interface, to avoid loss of characters with SuperScript.) At the same time a small number of interfaces appeared which convert serial to centronics. These often have a number of special features built in (my Xetec interface allows me to obtain near-letter-quality output from the Epson).

In response to Paul Blair's query (Vol 11, No 3, P 261) I have tried to use an Epson FX-80 (fitted with an IEEE interface) with both Micro-Swift and Timeworks' Swift-Calc. Using the Brain-Box to drive the printer gave continual problems, similar to those Paul describes. In the end I gave up, disconnected the IEEE card in the Epson and bought a Xetec serial to Centronics interface which solved all the problems. In Paul's case, it is not possible to convert the 1361 to Centronics, so I would advocate using either a PET with Sipod or (if he can find one) an Interpod. For both of these systems, the computer sees only a standard serial output, there is no additional code wedged in as would be the case with the Brain-Box.

Printing Lower Case

The earliest PETs powered up set to produce upper case letters and graphics symbols (graphics mode). They could be switched to display upper and lower case (text mode) by executing the statement POKE 59468,14 (this works on all PETs). The 80 column machines were recognised as being business machines and therefore powered up already set in text mode. The home computers went back to the style of the earlier machines, powering up in graphics mode. They can be toggled between graphics and text mode by holding down the shift key and pressing the CBM key. The Commodore dot matrix printers, both parallel and serial also power up in graphics mode. However both character sets are available simultaneously as in the 128.

To set the printer into text mode, use is made of a secondary address. For once Commodore almost standardised - both parallel and serial printers use secondary address 7 to get normal text. However, I did say almost!

For parallel printers the switch to text mode is made by printing to sa 7, then printing the text to the normal channel; thus:

```
10 poke 59468,12:rem this is for pets
20 open 1,4,7:    rem sa=7 controls text mode
30 print#1:       rem print to the sa to activate it
40 close 1:       rem now finished with the sa
50 rem                now ready to print
60 open 2,4:      rem actual printing does not use an sa
70 print#2,"Hello, This is UPPER and lower Case!"
80 close 2:       rem all done
90 end
```

OK, so it's a trivial example but it shows the method. The printer will remain in text mode until the printer is powered down, reset (use of sa=10) or set into graphics mode (use of sa=8). Use of sa=7 is the mode I always used with an 8023 printer, the only problem area is output of square brackets and the backslash when some trickery is required.

The alternative method is to leave the printer in graphics mode and prefix every line sent to the printer with a cursor down character. This works well but does mean that there is a difference in printing to the screen or printer.

Serial printers again use sa=7 but in a slightly different way. Characters sent to sa 7 are printed in text mode. The following simple example demonstrates this:

```
10 print chr$(14): rem this is for vic/64/128
20 open 1,4,7:     rem sa=7 controls text mode
30 print#1,"Hello, This is UPPER and lower Case on Channel 7!"
40 close 1:        rem all done
50 end
```

I hope this has enabled those of you who have acquired PETs and printers without manuals to get a bit more out of your equipment. If you have specific queries, I will try to answer them and they may feature in this column.

Disk Recovery - Disk Discovery

I recently received a request for a copy of the PET Library Catalogue disk. In with it was a Commodore WordPro 3 disk, which the sender said would not work on his 3032 though the machine did have the WordPro ROM installed. He asked if I would check the disk and let him have a new copy if needed. WordPro was, of course, a commercial program but in circumstances like these where the member sends in a faulty master disk, I am prepared to supply a copy if I have one. In this case I could not provide a copy as I have never owned this program.

On looking at the disk, I discovered that the first block of the directory was corrupt, giving a #24 error. I tried the disk on both the 4040 and 1571 (with half track stepping) but neither would read the sector. The next stage was to load Precision's Super Disk Doc.

The first thing I found was that it was a DOS 1 disk, for the 2040/3040 drives. The sure way to wreck these disks is to write to them in a 4040, so I knew that attempting to re-write the faulty block (which often works) would lead to total ruination. SDD would read the disk header block (18,0) but failed to access the directory. From experience, I know that the order of sectors in the directory is 18,1; 18,4; 18,7; etc. By using SDD I was able to read 18,4 without problem and trace through the rest of the directory. A screen dump of each sector provided me with a list of the files, their starting track and sector and the length in blocks. I then tried again to read in sector 18,1 and got the read error. Again from experience I knew that often it is just the last few bytes, or even the checksum which causes the problem and that the disk drive has taken the contents of the sector into its RAM but has failed to release it to the computer. By using the 'Disk Memory Read' feature of SDD I was able to scan through the RAM until I found a block which looked like the first sector of the directory. What I found was that it was complete apart from the last 22 bytes. These represented much of the eighth filename and the length of the file. From

the pattern of filenames both before and after it, I could predict the missing name and by tracing the file from the starting block I could count the length. I wrote this extra information onto the printed screen dump and was ready to start the recovery.

Normally one would recover the files by copying them to a fresh disk but with the first block of the directory corrupted, it is impossible to access files. Instead I wrote a simple program to read a given block into disk RAM, extract the bytes one by one and write them to a sequential file on another disk. When all the bytes from one block had been read, the track & sector link pointers (first two bytes in the block) would be used to obtain the next block. To make the program as automatic as possible I used data statements to store all the filenames and starting track & sector information from the screen dumps. By this means, I was able to recover the WordPro 3 program and 28 files of text for the manual. However there is a difference between DOS 1 and DOS 2 disks. Because of minor reliability problems with the 2040/3040 disks, when Commodore bought out the 4040 with DOS 2, they slightly changed the disk format by reducing the number of sectors on tracks 18 to 24 by one. It is generally stated that these disks are read compatible between the drives. This is not strictly true.

What I found was that using direct access programming (ie: block reads) I could not access sector 19 on tracks 18 - 24. On both the 4040 and 1571 drives I got a #66 'Illegal track or Sector' error at every attempt to access them. Five of the text files used these unobtainable sectors and hence I could not recover these files. The solution was obvious - use a 3040 to read these files. Problem I don't have a 3040. By coincidence I had just had a request for a Library Catalogue for a 3040 drive from someone a few miles away. A quick phone call arranged for the loan of the 3040 for an evening.

Only when I got the drive home did I discover that it, like my own drive, bore a label on the outside which said it was a 3040 but the ROM set had been upgraded to 4040. Desperation was now setting in! A phone call to Mick Bignall secured the loan of a set of 3040 ROMs. Within a couple of days these arrived and my 4040 was duely downgraded back to a 3040.

At this point a further problem arose. There is a bug (only one!) in the 3040 ROM. Using block-read and then GET corrupts the first byte of the block. The first byte is the track link, so is important for tracing through the file. Mick later recommended using a direct memory read of the disk RAM to extract the information once it has been read in by the block read. A further investigation with SDD and a bit of guess work allowed me to obtain a list of the file chains for the five files. It was then simple enough to modify the program to allow the track link to be ignored in favour of one put in from my list. Finally I had all the

files transferred to another disk.

Having consistently failed to read the extra sector on my drives, I made up a 3040 disk with files extending into these sectors. To my surprise I could read all the files on both 4040 and 1571. It appears that there is some very clever coding in the ROMs. Although direct access will not work, file reading does not check whether the required sector is in range, it just goes ahead and reads it.

Throughout this article I have referred to Block-Read of the disk. I should point out that the 'B-R' direct access command has odd effects and to perform a block read the 'U1' command should be used on all drives.

Keyboard Lock-ups

Mike Kingsley wrote to me sharing his recent keyboard lockup problem. He writes:

"Over the years my set up has grown to include a C128, 1570, Excelerator Plus, DPS1101, MPS801, 1520, MPS1200, a C64, 1541 and a Tandy Monochrome Monitor wired to 40 or 80 columns (another story in itself).

"I have been using my 128, 1570, Exelerator + C2N cassette, MPS1200, Tandy monitor and two joysticks (one with an extension lead) for some time now and every now and again certain keys would not work with Superscript but it was intermittent. Computer getting past it I thought.

"Then I found some commercial programs and games played up but would work on the C64/1541 combination (keyboard hanging up usually on the 128). I then found that some games ie. 'Gunship' that used to be ok. now would hang up the keyboard.

"First step was to check disk drive alignment - no problem found. Then a process of disconnecting the drives not in use, the monitor going back to using the TV. Disconnecting the printer, using the 1541 - no change found.

"Only when I disconnected the Joystick extension lead after reading a comment about I/O problems affecting the keyboard in the magazine was the problem solved.

"My 128 now behaves perfectly with both joysticks connected and everything else re-connected provided the joystick extension is not used even though there is no fault on it that I can find.

"The only problem is I no longer have an excuse to buy a replacement ie. an Amiga.

"I hope this may be of use to some members who are having similar problems."

Texas Trip

Readers of Betty Clay's 'Texas Tales' may have noticed that last time she referred to a forthcoming trip of mine. My brother Chris and I spent a fortnight in the USA at the end of May (hence my non-appearance at The Show) including four delightful days in the company of Betty and Richard Clay. Although Betty is our correspondent on things Amigan, Richard is the real power computer user in the household - his machine is a Super PET (SP9000).

Computers took a fairly low profile throughout the trip but we were glad to meet Don Kassebaum at Austin and have a brief tour of the Computer Centre of the University of Texas, though we didn't get to see the Cray. Later on at San Antonio, we were unable to visit La Villita (a craft village) while it was open. This was unfortunate as I had particularly hoped to get to see the glass blower. Not so much because of the glass-blowing but more because he is Larry Williams - a PET man, who if I recall correctly used to write for Compute.

I must take up a couple of points raised by Tim Arnot in his piece "Tim's Trip to Texas" Vol 10, No 6. Like Tim we found Tex-Mex food addictive and we discovered that as Tim reported they do put limes into their beer. But think about it; American beer is very like lager; Lager & Lime is quite a common drink here. OK, so the Mexicans use real limes, not lime juice. [Ah, yes, but the Mexicans have a beer which is very close to Bitter, & this is what I had with limes in! - Ed]

Whilst talking of drink I must mention the beverage which we found totally addictive but which Tim tried once and would not touch again. I refer to iced tea. We were introduced to it by Betty and Richard and trying it first unsweetened were not impressed. However once sweetened it was delightful and became number one choice with all meals. In fact later in the holiday I was quite put out when a cafe did not have iced tea and we had to make do with beer.

MEMBERS SPECIAL OFFER

Several members have reported difficulties in obtaining the 23 pin 'D' connectors required for the Amiga disk and video ports. Member Bob Martin, of 59 Hollie Lucas Road, Birmingham B13 0QH (021) 444-2708 is able to obtain both items along with their respective hoods. Please send him an S.A.E. or phone for details.

PERILS OF PAULA, AGNUS & DENISE - 8

by Brian Grainger

My Newsletter index for 1988 tells me the last 'Perils' article was in March 1988. At that time I thought the new user to the Amiga had matured and little else needed to be said. Now that Workbench 1.3 has come along I think there is a need for another article. Basically I want to explain how I set up my Amiga 1000 to work with the new Workbench. In the process I may duplicate parts of Ken Turner's article on Startup-Sequences in the March 89 Newsletter but I hope that is accepted as I want to expand on it a little bit as well.

Being a constant user of the CLI environment I was really pleased when Workbench 1.3 arrived. With the Shell and additional commands it added much needed power to the CLI. The problem was that on my standard A1000 it took considerably longer to boot up, which annoyed me somewhat. I therefore took to investigating the Startup-Sequence to see how it worked and how I could improve the boot up time.

The first thing I did when I bought my Enhancer pack was to copy the three disks (Kickstart 1.3, Workbench 1.3 and Extras 1.3) and then store the originals in my software library. All further work was done with the copies.

After making the copies the first task I carried out was to install the printer driver relevant to my printer. Booting up with my Workbench disk in DF0: and Extras disk in DF1: I opened the Utilities drawer and double clicked on 'InstallPrinter'. A list of drivers from the Extras disk was shown and I replied to the prompt with the driver for my printer, the MPS1000. The driver was now copied to the appropriate directory of my Workbench disk. This did not enable my printer to work. To do that it had to be selected in Preferences so the next step was to open up the Preferences drawer and double click on 'Printer'. Because the driver file had been copied over it was now in the list of printers to choose from so having selected it, and set the paper sizes to my liking, I saved the modified preferences to the Workbech disk and exited.

I could now print things. This enabled me to explore the directories on the new disks and get a copy of the Startup-Sequence so I could review how to change it. However before doing that I solved another problem. I had now started to double click the 'Shell' icon on the Workbench disk to get to the Shell environment and was extremely annoyed to find that the Shell window was only a few lines deep and located halfway down the screen. I wanted it to be a full screen. I read the 'Enhancer' manual and there on page 1-2 appeared to be the answer to my problem. All I had to do was add the following tool type to the Shell icon:


```
window=newcon:0/0/640/256/AmigaShell
```

I did that and saved the modified icon. I double clicked it and I STILL HAD THE SAME SMALL WINDOW! After a few times of trying various options like 'WINDOW' instead of 'window' I gave up and decided I had found my first bug in Workbench 1.3. The window tool type does not work. If anybody can prove otherwise please tell me what I was doing wrong. [It does work, but it is extremely fussy. Both WINDOW and NEWCON must be upper case, and there must be no intervening spaces. Intuition is not always intuitive! - Ed] Anyway, I still wanted a full screen Shell window so I do what I always do in a case like this, ask someone else. In this case Brian Fowler got a phone call! He told me what to do. I needed to modify the code on the disk. You will find the appropriate code on Track 49, Sector 4, Head 1. Use your favourite disk editor to change it. It shows as:

```
0/50/640/80
```

I changed it to:

```
0/0/640/256
```

Now when I double clicked the 'Shell' icon I had a full screen shell.

It was time to modify the Startup-Sequence. Because space was short on the Workbench disk the process involved was first to copy s/startup-sequence to RAM:. The Startup-Sequence was edited in RAM: as follows:

- I changed the message echoed to screen to show 'A1000 Workbench' rather than 'A500/2000'.
- Because my A1000 has no expansion memory beyond 512K I deleted the line to set FastMemFirst (line 5).
- Because I had no external devices, other than a floppy, I deleted the 'Binddrivers' line (line 6).
- Because the A1000 does not have a built in clock I replaced the 'SetClock load' line (line 7) with 'Date ?'. Some people do not like to set the correct date and time for some reason. I find it very handy when I want to look back over my files and know when they were created. For example, in order to type this article I had to remove some files to create some disk

space. I looked at the file dates to determine which were old files and could be deleted.

- Finally I changed my setmap to usa1, rather than gb, in line 18. My A1000 has an American keyboard.

After doing all the above I was not sure what else I could delete with confidence so I resaved my edited file. At this stage it was still in RAM: so I had to delete s/startup-sequence and then copy the new version from RAM: to the 's' directory. I rebooted. It still took longer than I liked but it was definitely quicker. I decided to consider whether I could delete other lines. Looking at StartupII I wondered if all the lines were necessary. I decided that it was almost certain the I would use LIST, CD, and RESIDENT quite frequently so they were going to be resident. MOUNT, ASSIGN and MAKEDIR were used in the sequence so making those commands resident had to be necessary. I then wondered what the three directories RAM:t, RAM:env and RAM:clipboards could be doing. They were all new from Workbench 1.2. Well RAM:t is a temporary holding space for use when script files are executed. It seemed like a good idea to keep that so that any script files I might run may execute more quickly. RAM:env is used to store environment parameters, which I have not used to this day. Consequently it is a candidate for deletion but, so far, I have not done so. Finally RAM:clipboards had me stumped. What was this doing. It finally came to me that items which are cut from an application, such as text in Scribble, are stored here. On Workbench 1.2 it was stored on the Workbench disk. As I use Scribble a lot I decided that would be handy to keep, to speed up cut and paste. Not much left to consider for deletion now. A few devices are mounted and they seemed quite useful to have instantly available so I was drawn to the conclusion I could not delete any lines from the StartupII file.

I wondered if I could save some time by combining the two Startup files into one. Why were there two anyway? It was not at all clear to me. The only clue was that the comment to line 15 of s/startup-sequence says that it lets 'resident' be used. However, 'resident' had already been used in lines 10 and 11! I was confused. When Ken Turner's article arrived I thought he was going to solve the mystery but no, it was as clear as mud. It did prompt me to ask around though. Eventually I got some understanding. The 'resident' command is a file in the 'c' directory of the Workbench disk. CLI executes any file in the 'c' directory. When the Amiga boots up it works in the CLI environment, NOT the Shell. Consequently 'resident' will work when the Amiga is booted up and it will copy the relevant commands to the special place in RAM. However, a command will NOT execute from RAM: when using CLI, only when using the

Shell. If I created one big startup sequence I would still be in CLI and when a command which had been made resident was called up it would still load from the 'c' directory before executing, despite it being in RAM. Line 15 of s/startup-sequence creates a secondary Shell process. Because it is a shell process, and not a CLI process, when a command that has been made resident is called it will load from RAM and therefore execute very much faster. Having seen the need for the two files I decided I could not shorten my boot up time any further and I would have to live with it until I could afford a hard disk!

Well that just about covers how I set up my Workbench. I personally found the step from 1.2 to 1.3 was a big one and I was searching in the dark for quite some time. Hopefully this article will shorten that time for other newcomers to 1.3. Having completed these tasks am I happy? With Workbench 1.3 I am, definitely. However I find it irritating having to click an icon to get at the Shell. I would like a hot-key. Anybody know how to modify POPCLI to get POPSHELL? I also find it irritating that when I use Scribble and I want to cut or print some text the Workbench disk has to be replaced for some reason. I would like the appropriate devices to be loaded on startup. I have been told that requesting the version number of the devices in the startup sequence might solve this but I have yet to try it.

So much for Perils of PAD 8. Roll on Workbench 1.4, and Perils of PAD 9 I expect!

DEVCON, 1989

by Betty Clay

Devcon, the Amiga Developers' Conference held by Commodore each spring, met in San Francisco in June. About four hundred registered and commercial developers attended, along with nearly all of the technical staff from Commodore. The meeting was organised and managed by Lauren Brown and Gail Wellington from Commodore, and it was done so well that we have yet to hear grumbling from those who attended. We are told that Commodore has done almost everything the developers have been wanting them to do, that they communicated well with the people who attended, and that this was the best run, most informative, and most pleasing gathering Commodore has sponsored since the introduction of the Amiga.

It was not my privilege to attend this meeting, so my report is drawn from a borrowed copy of the extensive notes (more than 700 pages!) distributed to

those who attended, and from the reports made to the various networks. There were many reports of parties, of people staying up all night in the computer rooms trying out the new things being discussed, and the like. Most of the discussion, however, is of the announcements made by Commodore.

1.4 is coming

The major thrust of DevCon was to prepare developers for the coming 1.4 upgrade to the Amiga operating system. The changes are extensive! This is really the first major upgrade to the system since the release of the machine. 1.1 and 1.2 were mostly bug fixes to make the original system truly operative; 1.3 was mostly to permit autobooting of hard disks and to repair flaws in the CLI interface. We are promised that 1.4 is a major upgrade, and here are some of the things that are to happen. The marvel is that with all the changes and improvements, almost all software from 1.2 and 1.3 will still run on 1.4.

AREXX: Arexx is the Amiga version of the scripting language, REXX. It is designed to pass messages to and between programs so that they can behave as though they were integrated packages. AREXX for the Amiga was written by William Hawes (CONMAN, WSHELL) and has been growing in popularity for more than a year now. It is stable. Commodore wanted such a scripting language - interprocess communication, to be more exact - and instead of writing their own, they have purchased AREXX and will distribute the entire package as part of the 1.4 upgrade. Perhaps you have used AREXX with SuperBASE Pro3 and SuperPLAN, two of the first major software packages to incorporate AREXX ports. All of the software houses will be putting out updates with AREXX ports soon, surely. We will all have to learn to use this new language, but it is much like BASIC. With enough examples around, and with a good manual, it should not be difficult. Bill Hawes will still be supporting AREXX himself, through a contract with Commodore.

ASL LIBRARY: A new library will be added to the Workbench, containing a set of standard requesters that programmers can use easily. The ARP file requester will be included in these, though perhaps not in the exact form that we know it now. There will be others. Programmers can call these standard requesters from their programs, or can write their own if they choose to not use the standard ones. This is a feature that programmers have been requesting from the very beginning. It will save a great deal of code-writing on their part, but it is more important that we will find more and more of our software conforming to these standards so that it will be easier to learn new packages as they come out. A standard requester of each type is to be provided, but exact information about this feature will have to come later.

COMMODOTIES EXCHANGE: This seems to be a standard feature of some other computers, but except for a few highly technical discussions on Usenet, it was a new term to me. I do not fully comprehend what it will do for us. My reading of the notes indicates that this is yet another method of exchanging information between applications. Among the examples discussed in the notes is the use of hotkeys, easily defined by the user. This feature will allow pop-up windows that are easily accessed. They can hide in the system without going away, to be easily recalled by mouse or hotkey. I know that this feature involves an input handler that catches the input before it reaches Intuition, and can direct messages to various tasks in the machine. Other than that, I will leave this one to someone else. Just know that we will have it in 1.4.

C: COMMANDS will all have been rewritten using the C language rather than BCPL. There will be changes, fixes, etc., but not much information about these is easily available. It is known that the newly written commands will make use of some new system libraries such as the re-done dos.library and the new asl.library. My guess is that the use of these libraries should make the code smaller. We shall see.

FONTS: We are to have font bitmap scaling with 1.4. Sorry, I have not been able to learn much about this, but it should give us smoother fonts: More later.

DOS CHANGES: We will be given the automatic ability to cut and paste between console windows, and will have AREXX support in the Shell. Did you love your PET screen editing? When 1.4 arrives, you can have it on your Amiga. [Now we see just how advanced a machine the PET really is! - Vice Chairman] With 1.4, we can select the current scrolling history form of editing, or can have PET style editing. Not sure yet if we could have both. AmigaDOS is being re-written in C. This will make it far easier for Commodore to update and maintain it, since C is a far more familiar language to most of the programmers working there. Many of the BCPL routines that have not been rewritten will be given new interfaces written in C, making them easier to use.

ECS: The new Agnus chips are already released, and many have them installed. The new Agnus is Chip #8372-R3 (if you bought a 2000 recently, look. You might already have it). The new Denise, not yet released, is part number 8373-R2a. The new Agnus will address up to 1MB of chip memory, and can handle much larger blits for moving graphics, etc. The new Denise will allow for new higher-resolution displays on the monitor - up to 1280 pixels horizontally on a standard NTSC or PAL display. There will also be a new scan rate. Those using multisync monitors will have a 640 x 480 workbench screen, and any software can be set to use this resolution. The new Denise will also

provide support for a number of new Genlock features. There are other advantages to these new chips, with the news to come later.

WORKBENCH: The user can call up a list of files that do NOT have icons, and will be able to manipulate them from the Workbench just as we now do those that have icons; that is, you can copy, delete, rename, etc. You will be able to add menus to the Workbench, as with Browser, so that almost all of the applications you use regularly can be started by selecting its name from a menu. It will be simple to add or delete items from these menus. It will be easier to select icons, select ALL icons, rearrange them in a window, etc. Workbench is said to have a new look that is really impressive. These may sound simple, but the developers are saying that this upgrade will do more for the Workbench than for any other part of the Amiga. Some are saying it will give the Workbench enough power that they can use it - for the very first time.

Those are the features that seem to be really new. In addition, there will be changes to almost every part of the system, mostly eliminating the problems that have vexed us. For example, we are promised that the trackdisk.device will be able to handle bad disks better, that it will be faster, and that the FFS will be in ROM and will be supported on floppies as well as on hard disks. That should speed up the floppies considerably. There will be new kinds of screens available, including public screens that can accept windows from another application program. The user will be given far more control over the way his Amiga operates. We can choose a backdrop picture or pattern to appear on the Workbench behind the windows, for instance. We can select our system font more easily and from a wider selection. The system font will no longer have to be an 8-pixel fixed font. Colour fonts will be supported by the system. Workbench windows will open faster; text will be speeded up yet again. The functions of most of the public domain and shareware programs that have been truly popular will be a part of the new Amiga, eliminating the incompatibilities that have made it difficult for us to use some of them.

Given another few days, perhaps I could have learned more about what is to come, but deadlines don't wait. All of the Amiga publications are certain to be filled with these things for months to come. I hope these few titbits have whetted your appetite - but please do be patient. We shall not see this update before the end of 1989 at best and mid-1990 is far more likely.

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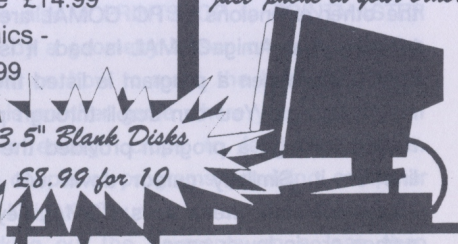

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COMAL CORNER

by Brian Grainger

I have got a few things to cover in this COMAL Corner. First of all I want to give my impressions of the AmigaCOMAL I have been beta testing. Since the listings of the latest COMAL disks were not published last time due to National Committee policy I want to give an idea of the main features of the disks. Finally I want to go back and mention some instructions for some of the programs on earlier COMAL disks. I started doing this some time ago but I seemed to have stopped after Disk 13.

The way I have been testing AmigaCOMAL is to take a program written for the PC COMAL and see how it performs on the Amiga. While the final version of AmigaCOMAL will include a compiler I have only been provided with the interpreter. I am also missing an install program and some packages which would make my life easier but I can certainly get going. The first thing about AmigaCOMAL is that on startup it comes up with two windows like AmigaBASIC. A command window where all commands are given and programs edited and an execute window where output is sent. Giving the command RUNWINDOW- will send output to the command window as well and if you resize the command window and hide the execute window it will be like using COMAL on the 64. The windows are currently sized for an NTSC machine and do not allow full use of the 256 vertical lines. In porting across my PC COMAL program I had very few problems. In fact there were only two. AmigaCOMAL would not accept one line REPEAT...UNTIL statements and the AND THEN construct was rejected. These problems were very easily corrected. Some of the other extensions of PC COMAL are not implemented either but this is not to imply that AmigaCOMAL is bad. It is that PC COMAL is so good! As with 64 COMAL when a program is listed the space bar can be used to pause and restart listings. You can scroll through programs as well so that cursor up will retrace through a program provided the top line of the window has a program line on it. Similarly cursor down will scroll forward. As with most COMAL implementations these days COMAL keywords are listed in capitals while other names are in lower case.

I have only just started trying to run my program and as I have found a difference in the way AmigaCOMAL treats VAL I have not got very far. Apart from this problem which I am sure will be corrected by the time COMAL hits the streets I have been very impressed by the compatibility of this COMAL with the PC version. Although I have not tried it yet creating packages in COMAL is simply a matter of saving a COMAL program with the right name

and adding a few extra commands to deal with the transfer of values to and from the main program. AmigaCOMAL will come with graphics packages, narrator packages as well as packages to access the Exec, DOS and Intuition libraries.

The most significant new feature of Amiga COMAL, which I suspect will appear in the next version of PC COMAL, is the implementation of records, pointers and dynamic variables. To be honest I still do not understand how important these features are but I believe those who tell me that they are!

As yet I do not have any further news of when AmigaCOMAL will be available but I do not expect it to appear before the third or fourth quarter of this year. The one piece of good news is that the company who is producing it now has a name, ComWare. Talking of names, Mytech has changed its name to Alder so references to their Amiga COMAL will now refer to Alder COMAL.

In the last newsletter I mentioned that COMAL Today disks 18 and 19 were available. Due to the National Committee policy, the listings for the disks were not published. While this seems OK for popular items such as Amiga or 64 disks, where members ask for them simply because they exist, I wonder if the policy will hold back items of minority interest. How often, for example, have you been persuaded to ask for something when you know nothing about it, even when it is free. In order to redress the balance without taking up too much newsletter space I thought I would give a quick rundown of the major items of the new disks.

Looking at disk 18 programs to use with the Power Driver we start with a directory printer for the 1520 which uses all 80 columns. The results are ideal for pasting to the disk sleeve. Graphics is covered by a picture drawing program to draw 3D pictures. There is also a PRINTSHOP to PRINTMASTER picture converter. Education is covered by a geometry lesson on the properties of circles and a typing tutor. A program on how to make the best of a game of Pontoon (Blackjack) is available, as is another game where you have to run a kingdom by making sure there are enough crops to feed the people. Speciality programs are covered by a couple of programs providing computer generated poetry and one to generate Knight's Tours from any position on the chessboard. If you have trouble working out the payments on a loan then Amortisation is the program to look for. A few font files are also included on this disk.

Disk 18 for the cartridge has much of the above plus a program to help solve cryptograms for all you code enthusiasts. A text processor is also included written primarily to prepare assembler source code. Epicycloids and Mandelbrot produce graphic patterns. The game of Reversi (Othello) is on the

disk and a utility to duplicate disks, which uses two disk drives, is also there. If you want a list of all the procedures/functions used in a program then PROC.PROCS will help. The packages on disk 18 include one to generate an on screen clock, one to enable two independent co-resident COMAL programs to run at once and finally one to enable a Commodore mouse to be used with COMAL.

Disk 19 for the Power Driver is aimed primarily at programs for the younger person to use. A colouring book program is included which allows the use of a joystick to colour segments of a picture. The classic hi-lo game is included and the bulk of the rest of the disk is taken up with Alphabet Soup. For the more serious user a couple of programs to show rotation of a 3D image are included together with one to generate a stereoscopic image on a 1520 plotter. The latter uses the red/green pens to produce the image. You then use appropriate colour filters during viewing to produce the stereoscopic effect.

Additional items on Disk 19 for the cartridge include a simulation of the impact of a virus epidemic on a population. 3D pictures are included again with a program to produce wire frame images. A couple of games are included and the disk is completed with a couple of utilities. One to unscratch a COMAL program. Another is an enhancement of the Smart'Reader program on disk 16.

As I said at the beginning it was a significant number of newsletters ago when I last covered instructions for the more complicated programs on the COMAL Today disks. I had reached disk 13 so I will look at disk 14 this time. There was a subtle change in the HI program on the 0.14 COMAL side which sent three POKEs. One to make a printer print to secondary address 7, which results in lower/upper case mode rather than upper/graphics mode. The other two POKEs made 0.14 COMAL indent listed programs when they were listed to disk. Until then 0.14 did not do this, which is something that 2.01 COMAL had always done. LISTERINE, for both versions of COMAL, read a COMAL program listed to disk and separated its procedures and functions before listing each one separately to disk. This technique could be used to generate a library of procedures/functions. PROGRAM'OUTLINER was another tool which showed a programs strcutures more clearly by drawing lines connecting the structure elements. The program to be outlined must be listed to disk with indentations. The outlined program can be displayed on screen, printer, or listed to disk again.

CUSTOM'DIR for COMAL 2.01 will print a disk directory in two columns in small print onto paper. It is fairly easy to change the style of printing by resetting certain parameter values (which are all in one module of the program). COL# defines how many columns are printed. OFFSET# defines the number of spaces at the beginning of a line and DIVIDER# defines the number of blank

spaces between columns. S# defines the number of spaces between parts on the line and B# the maximum number of digits in the filesize.

PACKAGE'MAKER was an educational prototype of a COMAL 2.01 program to create assembler source code for a COMAL package from a COMAL procedure. The procedure must be merged with PACKAGE'MAKER and then the combined program is run. The name of the procedure is asked for followed by the name of the package that you wish to create (which must be different). Finally the file specification of the source file is asked for. LP: will send the result to a printer, DS: to the screen, and any other to a disk file. The prototype has limitations:

- only CLOSED procedures can be compiled. Functions are not allowed
- only one procedure per package
- no strings or arrays allowed as parameters
- WHILE...ENDWHILE, IF..THEN / ELSE / ENDIF are the only structures catered for. No one line IF commands allowed.
- no PRINT or IMPORT statements
- no calling of other procedures
- ATN, COS, ESC, EXP, INT, LOG, RND, SGN, SIN, SQR and TAN are the only inbuilt functions allowed
- <,>,<=,>=,<>, OR, NOT, AND are the only logical operators allowed
- :+ and :- not allowed
- only real, integer and boolean variables allowed
- binary constants not allowed (hex is OK)

Despite the restrictions this program could be very instructive in showing how a package is structured. As an example of use PACKAGE'MAKER was used to compile PROC.SWAP into the source code file SRC.TEST'PACKAGE. This was assembled into PKG.TEST'PACKAGE. All of the files in the process are on the 2.0 side of Today disk 14.

WINDOW-RS232.OBJ and WINDOW-SPRIT.OBJ are both machine code programs for COMAL 0.14. The first is located in the RS232 buffer and the second in the $C000 area of memory. They both allow scrolling, in any direction, of any size window on the COMAL 0.14 text screen. An example of use is given in DEMO/WINDOW.

On the 2.0 side of Today Disk 14 there is a database program written in COMAL. All the files prefixed DB' should be copied to a blank formatted disk. Use this disk to create and amend data. The program is started by RUN db'boot. The rest should be fairly self explanatory from the menus. Each database record can hold up to 254 characters and a field name and its length

must be less than 40 characters. When designing an input form use [] to indicate field lengths and use only the first 20 screen lines. When finished press F7. The system will handle up to 400 records maximum but the sort time will get longer as the number of records increases. 100 is reasonable. An earlier 0.14 version of this program was on Today Disk 8.

There are four packages on Disk 14 for COMAL 2.01. I have already mentioned TEST'PACKAGE. PLLPRT was taken from a UK disk so that has been explained before. DUALSCREEN is a package to copy a graphics screen, including colour, to a free memory area in 1/6 second. After LINK PKG. DUALSCREEN and USE DUALSCREEN two procedures are available. GETSCRN copies the graphic screen to free memory and PUTSCRN restores the graphic screen from the definition in free memory. I think that the package C128 can only be used with the additional SUPERCHIP ROM so I will not go into detail here as not many of you have that chip.

Finally for COMAL 2.01 there is a puzzle. The program called PETALS is a game. The object of the game is to determine how the game is played! Five dice are tossed and the results displayed graphically on the screen. The player must guess a number which is in some way related to the toss of the dice. The computer will then give the correct response. The object of the game is to discover that relationship so that the player's response will always match the computer's. Only three hints are given:

- The name of the game is 'Petals Around The Rose.'
- The solution is always an even number.
- The computer always gives the correct result.

Six correct responses in a row will indicate the game is cracked. The player is then pledged to secrecy and awarded a personalised certificate of membership in The Society of Petals Around the Rose, which may be optionally copied to a printer. It may be helpful to have pencil and paper but remember the solution is truly simple and bear the hints in mind, especially the first one. Have fun.

I am indebted to the US COMAL Users Group Ltd. for details of the programs on Disk 14. Hope you find them useful and if you do not already have the disk perhaps you should ask me for it. Usual software library rules apply.

FITTING A 1.3 ROM IN AN AMIGA B2000.

by Bavin Clarke

At the recent Commodore show I managed to get a 1.3 ROM for my B2000. It was supplied by Power Computing. The ROM comes with no instructions or documentation, but this is no real problem.

So to the details. To do the job you will need a star screwdriver plus some form of chip puller. I use an old neon screw driver which I have bent to form a U shape.

First remove the five screws that hold the case top on. This exposes the internal workings of the B2000. At this point I scratched my head, as I could not see the ROM. After studying the board and the internal layout of the B2000 it became clear that it would be necessary to remove the Disk drives and power supply assembly. On closer inspection it was found that these could be removed as a single unit by undoing the four screws on the back of the Amiga and the three on the front.

Having removed the power supply and drives the next step is to remove the 1.2 ROM and replace it with the 1.3 ROM. Removal was quite straight forward, care should be taken not to bend any pins or otherwise damage the chip. Now insert the 1.3 ROM the same way round as the 1.2 you removed.

The new ROM now being in place, put the Amiga back together, though at this point do not screw anything back. Replace all the cables removed to do the job and power up the machine. All being well the screen displays the workbench request screen showing version 1.3. So if all is ok replace all screws and close the machine. If not power down immediately and check your work.

You now have a 1.3 Kickstart Amiga. So what are the benefits? If you are fortunate and have an auto booting hard disk system then you can use the autoboot feature. Also it appears that the hard disks run faster, and RAD: works. On the negative side some software, mainly games, will no longer run. I have not found any yet. If you do come across one, please report it to me, and get in touch with your supplier and the manufacturer and see what they can do for you. Any reports of programs failing to work with 1.3 will be published in the Newsletter so that other users may assess the risks involved in the upgrade. Also I will give the software house a chance to reply.

I hope this article has been of help to those wishing to upgrade their machines to Kickstart 1.3 in ROM.

THE COMMODORE PC1

by M.D.G. Preece

Although I have been involved in the use of computers at work for many years, and have been a part of various teams involved in the project management of the design and implementation of computer systems, my home computing facilities have been rudimentary to say the least. Indeed, dare I confess it, until the last couple of months, my home computer was only a Sinclair Spectrum Plus. However, recently, I have gone up in the world, by buying a Commodore PC1, and thought my experience may be of use to others.

I did not require vast processing power, great speed, massive storage or even sophisticated multi-tasking facilities. My main requirements were to run word processing, spreadsheet and simple database applications. Indeed I had been able to meet my needs with the Spectrum. My primary reasons for wanting to move up market, quite apart from the fact that I had a little money available, were frustration with dealing with the unreliability of the Spectrum's micro-drives, resulting in loss of data if very careful and regular backup procedures were not followed, and a total incompatibility with my office systems. When I did work at home, using the computer, data then had to be re-entered manually at my office.

My requirements were comparatively simple, but the primary one was that the machine should be a true PC compatible, to allow easy data exchange with the systems at work. Initially I would be content with a monochrome screen, although I wished to be able to install a colour monitor later. The cost needed to be under £500, and ideally I wanted a twin drive configuration, if possible one 5.25" and the other 3.5", since we used both types in the office.

Inevitably, with the publicity they have been receiving lately, I started by looking at Amstrad. However, I then saw adverts in the computer magazines for PC1s from a number of manufacturers. Ultimately I selected the Commodore because it appeared good value for money, CBM have a good reputation for reliability, and the machine appeared to offer a measure of expansibility, including support of an external drive. I calculated that I could acquire a twin disk configuration for a few pounds over £400. My order went into the post and in due course the machine arrived.

Even as a single disk machine I was pleased with my purchase and had little trouble configuring it to drive my serial daisy wheel printer, and it certainly showed total compatibility with all the software I had occasion to run on it. From the onset, I was able to bring my word and data processing home on a disk and continue at home. I immediately ordered an external 3.5" 720K disk

drive, advertised as for a PC1, and had little trouble in connecting and getting it working. Despite playing the options on the device driver and drivparm commands in the config.sys file however, I have still not got the format command working to format new disks as 720K disks. However I have got around this by using DISKCOPY with an already formatted disk.

Since getting my system I have played around with the CONFIG.SYS file quite regularly. I remember reading, in a letters column of another magazine, a comment that, with twin drives, there seemed no benefit in the ability to set up a single drive as two logical drives. It has proved of considerable benefit to me, since I have made both my drives two logical drives, enabling me to COPY or XCOPY from 5.25" to 5.25" disk, from 3.5" to 3.5" disk and between the two sizes, giving me great flexibility with only one drive of each type.

So what problems are there? I am horrified by the minimal detail contained in the PC1 User Manual. CBM have provided excellent MSDOS and GW BASIC Manuals, and yet the User Manual consists of only 14 pages on the PC1, with the rest devoted to a summary of MSDOS and BASIC commands, which are already covered so well in their respective manuals. There is very little guidance on how to use or expand the system. I feel sorry for the purchaser making his first foray into computing; it certainly does not provide a novice's introduction into getting started: the Spectrum manual did!

I have already mentioned my formatting problem which may be peculiar to the drive, not a CBM one, which I purchased. However, the User's Manual also states that a Microsoft Mouse can be used, and that the system disk includes a driver program to provide compatibility. I cannot identify such a program and have failed to get a Microsoft Mouse (thank goodness borrowed) working, at least from the mouse port. A dealer has told me that a CBM Mouse is required, but that the software driver is not available; poor support, inadequate manual, or an incorrectly briefed supplier? Again, the manual refers to the bus expansion slot, which implies that the capabilities of the machine can be expanded, but there is no reference to how to use it or what it supports, although I understand that there is an expansion box which must be connected to this slot as an interface to other devices. Why, could CBM not include details in the manual.

Overall the PC1 is a good machine which, with the external drive which I purchased, has more than met my simple needs, and has provided excellent value for money. It seems to have the capability for all the expansion which I foresee at this stage, including RAM, adding a mouse using the mouse port rather than the serial port, and perhaps, later, a hard disk or card. However, the availability of information on these additions, and maybe even the hardware and software to achieve it, is not as apparent as I would have liked.

SUPERPIC AND THE A1000

by David Martin

Although advertised for the A500 and A2000 I decided to buy the SuperPic video digitiser for use with my Amiga 1000 with 1Meg of RAM. The first thing I had to do was change the sex of the parallel/printer port from male to female, rather than replace the connector itself, a plug-in gender changer is normally used.

On checking with an ICPUG member who has an A500 I discovered the parallel/printer port had the same signals as an A1000 but they are not wired to the same pins. One noticeable difference was that a pin which carries 5volts on the A500 is a ground signal on the A1000. I therefore decided to make my own gender changer lead as follows:-

PIN	A1000	WIRED TO	PIN	A500
1	DATA READY	<---------->	1	STROBE
2	DATA BIT 0	<---------->	2	DATA BIT 0
3	DATA BIT 1	<---------->	3	DATA BIT 1
4	DATA BIT 2	<---------->	4	DATA BIT 2
5	DATA BIT 3	<---------->	5	DATA BIT 3
6	DATA BIT 4	<---------->	6	DATA BIT 4
7	DATA BIT 5	<---------->	7	DATA BIT 5
8	DATA BIT 6	<---------->	8	DATA BIT 6
9	DATA BIT 7	<---------->	9	DATA BIT 7
10	ACKNOWLEDGE	<---------->	10	ACKNOWLEDGE
11	BUSY	<---------->	11	BUSY
12	PAPER OUT	<---------->	12	PAPER OUT
13	SELECT		13	SELECT
14-22	SIGNAL GROUND	<---------->	17-25	SIGNAL GROUND
23	+5 VOLTS POWER		14	+5 VOLTS POWER
24	NO CONNECTION		15	NO CONNECTION
25	RESET		16	RESET

25 pin D-Type Female connectors both ends of the lead.

The first 13 pins are the same on the A1000 and A500. I assume pin 1, Strobe and Data Ready are the same. Having a cable with only thirteen wires I chose to wire the first 12 signals and Ground, as they seemed the most likely to be required by SuperPic.

SuperPic has a very short lead that connects to the RGB/Video socket of the Amiga, this socket is replicated on the back of SuperPic to which the monitor lead is connected. The only difference between the A1000 and A500 video socket is that pin 21 provides -5Volts on the A1000 whereas it is -12Volts on the A500. The monitor cable I have does not have a connection to pin 21 so I thought it safe to use.

Unfortunately SuperPic does not provide a 5volt supply on Pin 23 of the RGB/Video socket. This voltage is required by my Philips 10CX1120 television to switch to RGB input via a SCART connector. Most monitors and televisions that have a SCART connector can be switched to RGB input by looping Composite Syncs (pin 20) to RGB Status/Fast Blanking (pin 16) of the SCART connector, of course mine doesn't! Luckily I have a Philips CM8833 monitor which has a button on the back which selects RGB status from the SCART connector.

Connecting a suitable video input to SuperPic and switching everything on I had a clean video signal but the Amiga display was streaking and smearing. Switching everything off and checking the SCART lead supplied with the monitor, the Ground Signal went to pin 16 at the Amiga end. In the Amiga manual pins 17-20 are also shown to be Ground. Deciding SuperPic may use one of these other pins for Ground I wired pins 16-20 together in the monitor lead.

Putting everything back together and switching on, the smearing and streaking had gone from the Amiga display. I cannot say what I have done is correct but the pictures look fine. I expected possible timing problems using an A1000, if there are any I have not noticed them.

I only have a few minor niggles, in the manual I'd like to see a list of signals provided on the RGB/Video socket. A bit more explanation of how to use the tools in black and white mode, I have not been able to get EDGE to work. On SuperPic itself the three position switch used to select Amiga, Video or Framestore should be replaced by push-buttons or if possible be under software control.

I am extremely pleased with the pictures obtained from SuperPic especially in HAM mode. The ability to instantly freeze a colour video signal from off-air, camera, VCR or laserdisc and then input it into the Amiga is tremendous for someone like me who is not an artist. I obtained Superpic at the Commodore Show for less than £400 and think it represents great value when compared to the cost of similar devices used in broadcast television.

COMMODORE DISK DRIVES

by Paul Blair

[The Wizard of Oz sent the following article to Joe Griffin in printed form (as 4 A4 sheets reduced onto 2 sheets). It may be of trivial interest to some members to learn how it got into this newsletter.

The printing was first enlarged on a photo copier, to give A4 pages. These were then fed into a scanner, connected to an IBM PC clone, and the document was read into DisplayWrite 3. From DW3, the document was output as an ASCII file, which was copied onto a floppy, then transferred (using Kermit running on a Commodore 700) to an 8250 drive. Once it was on the Commodore disk, the rest was easy!]

There has been some curiosity shown about 'old' Commodore computer gear. In England, a series is running in the ICPUG magazine about the computer range. To complement those articles, these notes will attempt to capture the main details of the major disk drive peripherals.

A few words of caution. Commodore makes hardware and vapourware. The hardware is what we see and buy, vapourware is industry hype - nothing more substantial than that. Like many companies, CBM has made prototypes of experimental models. Some of these saw the light of day, others vanished into black holes if no real sales potential could be seen. The 1542 low cost dual drive would be remembered by many of you as the most ephemeral of this latter group.

Even when a model did come on stream, it rarely survived unchanged throughout its life. DOS upgrades (or bug swaps, as they became known), cost reduction exercises, shortage or cost of parts, and change of staff were all reasons for change. Often we as consumers were not even aware that changes had taken place. CBM Australia were often in the same boat, to their chagrin. So, a story or strong point (even a weakness) of a particular model was not always true across all units sold.

One last caveat. Model numbering is a curious CBM religion, and not always consistent across continents. What we read or hear in Australia may not always tie in with some note or other gleaned from a foreign source. But these deviations are relatively rare, thank heaven.

In the late '70s, Commodore drives were well ahead of the competitors. CBM described them as 'intelligent', which was true. Each drive had its own processor, together with an operating system built in. This had the benefit that it was necessary only to turn the drives on and they were ready for use. The

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disbenefit was that upgrades or fixes required relatively expensive chip changes.

Some of that leadership has been lost over the years, although current models represent quite good value for money. But too many aspects of drive design have not been improved. As other computers became popular, the speed and capacity of their drives started to put CBM designs in a lesser light, especially in the ratio of capacity per dollar paid. The present family of CBM and Amiga hard disk drives testifies to this.

Despite all that, CBM drives have been remarkable (so has the documentation, but not in the same way!) for generally good performance and durability.

What follows is a brief summary of the various models of CBM disk drives that I know about. Don't take it all as gospel, because I don't have access to company details, and my memory may let me down in places. CBM documentation being what it was (and is) provides an inaccurate guide, so I should type 'E&OE' somewhere in this article.

The CBM description system

To tell the truth, there really has been no pure system. Things started off well, with progressive numbering that could be rationalised. Then it all went to pot.

Unit identification has been made up of a two character identifier - usually a number (the DOS generic family) and a character (the disk layout). There have been 3 DOS families, 1, 2 and 3, with various 'sub-releases'. However, the families are not always correctly used - there are two DOS 3 models with totally different complexions. [Now three with the 1581. Joe]

The disk layout is easier to explain - there have only been 2 of these for floppies in Australia, and they have been used accurately. 'A' refers to 35 tracks per diskette side, and 'C' refers to 77 tracks per diskette side. I don't know how the 1581 is marked. [It is 'D' and has 80 tracks per side. Joe]

CBM has gone chicken with the 1571. Strictly speaking, disks HEADERed on a 1571 should be marked '3A', not '2A'. But some software looks for the DOS version, so rather than create a monster, CBM took the soft line.

Originally, CBM made only dual drives - two drives in one case, usually referred to as 'Drive 0' and 'Drive 1'. Two drives made one unit. To specify which disk drive to use required that you specify both 'unit' (eg, 8, 9) and 'drive' (0, 1). Dual drives were abandoned in the mid-eighties, and only single drive units have been made since. In the mess of CBM DOS rewrites, there are still remnants of the older 'dual' code in the single drive units. But dual units are wonderful for taking fast backups of disks. There is a remnant of

those days visible every time you load or display a directory - the '0' next to the disk name and ID means Drive 0, a hangover from the Drive 0/1 days.

CBM disk sizes have centred on 5.25 inch, although there have been 8 inch and more lately, 3.5 inch. There were also hard disk drives. Tables A-D summarise the main points of all Oz drives, plus a couple of others.

TABLE A - DOS A 35/70 TRACK MODELS

Model	C	DOS Ver	IEEE /Ser	Tracks (sides)	Empty Disk Cap. (blks)	Notes
2040 Dual	*	DOS 1 =1	I	35(1)	670	▪I think some 2040 units came to Oz. They were sold with a very small number of 1000 and 2000 model PET computers. They were not reliable, but then not much else was either.
3040 Dual	*	DOS 1.2 =1	I	35(1)	670	▪These were the main stock of CBM machines brought here by HANIMEX. They supported Random Access files, a forerunner of relative files. Any disk put in a drive had to have an 'I0' disk command before use.
4040 Dual	*	DOS 2.0 DOS 2.1 =2A	I	35(1) 35(1)	664 664	▪Probably the best drive CBM made. Relative files, lots of bugs wiped, very sturdy (rarely went out of alignment). Pricey ($1400 in Oz). A mark of wealth!
2031 Single		DOS 2.6 =2A	I	35(1)	664	▪CBM's first single drive. Using a DOS patched up from the 4040, the drive had a (deservedly) spotty reputation.
1540 Single		DOS 2.6 =2A	S	35(1)	664	▪The first LCC (low cost controller) unit. Made for the VIC, this was the first serial bus unit.
1541 Single		DOS 2.6 =2A	S	35(1)	664	▪Not much different from the 1540. Introduced with the C=64. The main difference was in timing, to take account of C=64 design. Very real problems when introduced. A lot of running changes made. Slow, oh

1551 Single	DOS 2.6TC (TDISK) =2A	35(1)	664	so slow. Spawned a whole industry of add-ons. Probably the first unit to be investigated by hackers. Now the 1541-2, the only consumer unit now sold here. Retrograde step.
1570 Single	DOS 3.0 S =2A	35(1)	664	▪Not sold in Oz, but there are units imported from UK. Made for Plus/4. Connected to the 50 pin cartridge port through a special parallel connector. Disk format identical to a 1541, but data transfer is 4 times FASTER than a 1541, twice as fast as a 1571. What a great idea!
1571 Single	DOS 3.0 S 3.1 =2A	70(2)	1328	▪A CBM funny. Introduced the same time as the C=128. Fast serial bus was used for first time. One sided version of 1571, now a good cheap buy, if you can get one.

▪The C128 drive. Double sided. Can be used as I-side, 2-sides or 2 sides used individually. 2 speeds. Another patched (& repatched) DOS, but does provide for IBM and CP/M formats Now only in C128DCR models CBM would probably like to drop altogether in favour of 3.5 inch disks, but too much pressure stops them for now.

TABLE B - DOS C MODELS

8050 Dual	* DOS 2.5 I =2C	77(1)	2052	▪Sourced from 2 makers (Tandon, Micropolis), had minor differences. Some you wiggled, some you eased. Relative file size was restricted, but upgrades were possible.
8250 Dual	* DOS 2.7 I =2C	154(2)	4133	▪THE disk drive - powerful, reliable. Still much sought after. In Germany, a user group has bought spare parts from CBM and plans to build them for sale!
1001 Single	* DOS 2.7 I =2C	154(2)	4133	▪Half an 8250. Good bulk store, but IEEE bus requires expensive interface to use with C=64/C=128 range.

TABLE C - HARD DISKS

D9060 Single	DOS 3.0 I	153(4)	19442	▪The story goes that the design of these was never completed, but units were shipped anyway. Either work for 1 hour or forever. Old technology, but still sought out for bulletin boards.
D9090 Single	DOS 3.0 I	153(6)	29162	▪See above.

TABLE D - OTHER

8280 Dual		(2)		▪Not in Oz, but Europe. Not much to tell, but probably IBM type formats were supported. Likely they were driven via a mock RS232 port. Uses 8 inch floppies.
1581 Single	DOS 10 S =3D	80(2)	3160	▪USA/Canada/Europe only right now. A radical departure from earlier CBM drives (uses MFM not GCR) and is MS-DOS readable. Uses 3.5 inch 'non-floppy' disks.

Extra notes

Models marked '*' in the tables had two processors. One looked after mechanical operations, the other processed DOS commands. Between them was some shared RAM, where instructions were transferred.

Later units, starting with the 2031 (IEEE) and 1540 (serial) had only one processor to do all the work. Some models came out more than once. The original 'garb' was a metal case, standing maybe 180 mm high. Later they were put out in 'LP' (low profile) plastic cases, only half as tall. The 2031 and 8250

were examples of this.

The LCC models sported a variety of disk doors - some were flip up flaps, others were lever twist. Some went from flaps to levers and back to flaps. I have no idea why.

These short-form notes could be expanded to cover a wide range of other matters - eg, why some plugs went in one way, others the opposite way [why some had fixed power leads, others detachable - Joe]. But I think the main variations are here. If you would like to add any further details, please contact me and we can expand the files.

(C) 1988 Paul Blair

Further Comments on the 1581 by Joe Griffin

The 1581 is a rather odd beast. Not only is it the only 8-bit CBM drive to use MFM rather than GCR but the disk is configured physically as follows:

```
Sides             - 2
Tracks per side   - 80 (numbered 0 to 79)
Sectors per track - 10
Bytes per sector  - 512
```

Logically there are two sectors per physical sector and the disk is configured as:

```
Sides             - 1
Tracks            - 80 (numbered 1 to 80)
Sectors per track - 40
Bytes per sector  - 256
```

Logical sectors 0 to 19 are on side 0, sectors 20 to 39 are on side 1. Logical track 40 is the directory track with the header in sector 0, bam in sectors 1 & 2 and the directory entries start in sector 3.

REVIEW - CED PROFESSIONAL

by Kenny Yeung

One of the most important and most widely used piece of software for any computer is the text editor. A sophisticated editor could be used obviously for editing and creating programs, composing documents etc, but also could be used for the less obvious, like viewing documents. Since an editor is used so often it must be very easy to "get into" but at the same time be sophisticated enough to perform complicated operations. Such an editor is the recently released CED Professional from ASDG Incorporated.

For an editor to be widely accepted in the Amiga community it must be excellent. After all, there are a plethora of editors already available either as public domain, shareware or commercial. Amongst these editors, perhaps the best was UEDIT by Rick Stilles. (This editor was originally shareware but now may be commercial.) So in order for CED, costing $99.99, to survive it must not be far from excellent.

Packaging

The CED package consists of a single disk and a manual. Manuals usually come in some standard size, usually A5 or A4, but not CED's manual. Its size is slightly shorter and wider than A4, and is in the form of a hard cover folder. This unusually bigger size not only means that it takes up more valuable desk space when opened, but also awkward to store away.

Inside the folder is an 89 page manual detailing the operations of the editor, and a back page advertising the AREXX programming language and the FACC II disk caching system. At the beginning of the manual are the usual contents pages, but there is no index at the end. However, this is not too unforgivable as the contents pages are very good in describing what is available. What is less forgivable is the absence of a summary or "cheat sheet" to provide a quick reference to the commands available. Splitting the manual into fifteen chapters, ASDG describes CED starting from basic editing and ending with advance topics. All the operations that are available are described in a manner typical of any computer manual. Perhaps the most important chapter of all is the one designated to the interfacing of CED with the command language, AREXX.

Starting up the editor comes in two forms:

- Since the editor is called CED, typing this at the CLI will invoke it,

- By use of the front end routine called ED.

Using method (I) fires up a copy of the editor, subsequent invocation of the editor by this method can cause multiple copies of it to execute. By use of method (II), ED first checks whether CED is already running. If CED is already running, ED will cause CED to open a new window with the file to be edited instead of running a new copy of CED. If CED was not running, ED will invoke it with the file as the parameter.

Once the editor is executed, one starts to appreciate the effort that ASDG have put into it. Almost every parameter can be altered to create a truly customised editor. A few examples of these are:

- A definable scroll rate ranging from a very smooth one pixel to the standard 8 pixel, one character, scroll,
- Ability to define any of the alphanumeric keys to any operation,
- Ability to place scroll bar at left or right edge of screen or even no scroll bar at all!

When the editor has been customised to your satisfaction it can be saved in the S: directory. Different customisation files can exist under different names which can be loaded at will. In fact, supplied with the editor is a customisation file which makes the editor emulate EMACS.

For the price, CED offers all the standard operations like find, replace, block (both columnar and line) cut, paste, print, etc. Deletion and undeletion can be carried out on character, word or line. This provides a very simple means to achieve cut and paste. The numeric keypad can be used as the normal numeral or cursor movement via the use of a toggle mechanism. A very useful feature is the autosave which saves the editing buffer(s) after a predefined period. Markers, up to 3, can be set anywhere in the editing buffer which allows fast access to often viewed areas. Auto-indent is supported thus blocks of code could easily be identified. A feature which is not available, I think, in UEDIT is the ability to find the matching bracket, parenthesis or brace that balances the one currently under the cursor. For the C programmers or mathematicians this is a welcoming feature. Special control code to control attributes of the screen or printer could be part of the file.

Apart from the above basic operations which most editors provide, there must be something special about CED to warrant the high cost. Fortunately for CED it possesses many outstanding features.

Macros

The first feature which stands out is the macro definition. This allows a sequence of keystrokes to be designated to a single key. Accessing this key with the <CTRL> or <ALT> replays the sequence of keystrokes. Most of the keyboard including the function keys can be assigned a macro. However, the macro facility is not without its problems. Unlike WordPerfect's macro facilities where file names and parameters can be part of the macro, CED does not offer this. At first this may seem only to be a minor problem but this limitation soon becomes major when you start to invoke AREXX routines.

ARexx

Perhaps the most important and useful feature of CED is the ability to interface with programming languages, particularly, with the command language AREXX. (I believe that this feature may be now incorporated into UEDIT.) With this interface it is possible to create routines which consist of more than just the editor's keystroke. Complete routines could be written which can address both the CLI and the editor, thus it is possible to create a "turbo" like environment, where programs could be written and executed without having to leave the editor.

Most of CED's operations have a mnemonic. For example, the operation "move to beginning of file" has the mnemonics "beg of file". When this mnemonic is placed in a CED addressed AREXX routine, the file in the current editing file view will move to the beginning of file (regardless of where the cursor was). For operations which have no mnemonics they can still be placed in an AREXX routine as "menu m n" where m refers to which menu, and n is the option number in that menu. Along with the operational mnemonics, there are seventeen other CED functions which can be used in an AREXX routine. Of the seventeen functions, the most sophisticated one is the "status". This function takes an integer parameter in the range 1 to 68 inclusive, and from it, queries the internal setting corresponding to the parameter. Results from the status operation are passed back to AREXX via the special variable, "result".

Some operations, for example, "search for ....", generate a message which pops up on the screen. For operations like these the generated result can be passed back to AREXX via the variable, "result".

To invoke an AREXX routine from CED, the routine's name is entered. This causes CED to search the current directory, and failing that, the directory REXX: for the routine. By default if the user does not type in a file extension when invoking the routine, CED assumes that the routine ends in ".ced".

Another way to invoke an AREXX routine is to install it on one of the function keys. A maximum of ten routines can be installed provided the keys are not already defined. Once the routine has been installed on a key, depressing it automatically executes the routine.

Key Executables

Earlier in the review I said that it is not possible to include parameters or file names in macros, and commented that this limitation becomes important later on in macro writing. This is where this limitation becomes problematic. CED offers a maximum of ten keys (function keys) from where AREXX routines could be executed just by depressing the appropriate key. However, function keys are usually already defined for other macros thus reducing the already limited "key executables". Macros can be defined to any key, not just the function keys, and these are automatically executed. One way to bypass the limited "key executable" AREXX routines would be to invoke the AREXX routine by the macro facility, i.e., include the routine name in as part of the macro. As mentioned earlier CED does not allow this, hence the name must be typed in when invoking by macro. This in my mind is clearly something which ASDG must have overlooked when they designed the editor and would be a worthy contender for the "wish list" on future updates.

AmigaDOS

Of course, apart from calling AREXX routines, CED can call AmigaDOS routines providing the editor has not completely detached itself from the initiating process. The search order for AmigaDOS routines is if the routine is not AREXX then it is assumed to be AmigaDOS.

Apart from controlling the editor from AREXX it is possible to control the editor from C. A short two side explanation is given of this in the manual along with a demonstration program (both source and binary) on disk. I have not yet tried to interface CED with C yet so I cannot comment on its functionality.

CED is not a Word Processor

Besides being a programming editor, CED offers few wordprocessing facilities. We have seen wordprocessors acting as programming editors but the metamorphosis in the other direction is less frequent. CED only offers very basic wordprocessing facilities. Paragraphs can be formatted to be right justified, word wrap could be used, lines could be centered, and control

characters placed as ASCII codes. Header, footers, page numbering, etc are not available, but on the program disk is the PROFF text formatter program.

Speed

As one starts to use the editor significantly, one begins to appreciate the speed of the operation, particularly with the movements. To put this speed into perspective I performed four simple tests on CED, WordPerfect and UEDIT. The file which the tests were performed on was 5000 lines and consisted of the word "rubbish" 25,000 times. Each one of the tests for the editors/wordprocessors were performed with the same number of background processes. The tests were as follows:

1. Move directly from beginning of file to end of file.

2. Search forward for a string at end of file starting from beginning of file.

3. Search backwards for a string at beginning of file starting from end of file.

4. Global replace all the 25,000 words of "rubbish" with "good".

Timings (in seconds unless where stated) for these were measured, and the results are as follows:

Test:	1	2	3	4
CED	Instantaneous *2*	2.7	2.9	2h 50m *3*
WordPerfect	19.0	24.9		approx 2m
UEDIT	Instantaneous *4*	19.0	16.7	Error *5*

Notes:

2. The screen moved too fast to perform the timing.

3. CED displayed each replacement on screen as it moved through the file. This considerably slowed down the process, thus the timing for this test was calculated on the basis that it took 3m 24s for 100 lines.

4. UEDIT displayed the end of file but cannot edit as cursor was still at the original position. To move to the end and edit file took 9.2s.

5. UEDIT changed some of the occurrence of the string before displaying 'error' on status line.

Other facilities which CED offers include:

- A hot key feature whereby the editor can be accessed from any application by depressing <RETURN>, <R-SHIFT> and <R-ALT> in parallel.
- Up to a maximum of ten windows or "views" can be opened at any one time. Each view can be another file or an existing editing file but may be at a different editing location. Consistency of views is preserved when editing a file with more than one view.
- Requesters automatically place themselves under the position of the pointer making selection much faster.
- A well designed file requester system thereby making file selection using the mouse a joy to use.
- Lightning fast screen update.

CED does not come without a few bad points or bugs - the main one, mentioned earlier, being the inability to include file names in macros. Apart from this there appears to be a bug when using ED to invoke the CED. A few times I invoked CED with ED without a file name. When CED was loaded it automatically opened several empty views without any intervention on my behalf. Of course these extra views could be removed but this bug somewhat tarnishes the CED editor as being a completely professional product.

To summarise the review, CED is an excellent editor- not quite perfect yet. There is not much to choose between UEDIT and CED. Both offer very similar features, but CED is more expensive. However, in my opinion, CED is more reliable as I managed to crash UEDIT many times and lost the entire editing buffer. This should not be possible with CED as the program, "RecoverCEDFiles", could be used to recover all CED files in an event of a crash. Finally, is CED worthy of its price, considering UEDIT is only approximately $40, I think, and offers very much the same facilities? The answer to this question really depends on yourself. Having used mine for some time now, I consider it to be well worth the price tag.

TECHNICAL PAGE #2.

by Bavin Clarke

The technical help register is now complete, and in total we have two hundred and fifty members who are able to help. In order to avoid over working any one of our volunteer helpers, please address all technical queries to me. I will then distribute them to the relevant helper. As a result of this change in policy every query must include two envelopes and two 19p stamps. One envelope should be self addressed the other should be plain.

Some queries will be published in the newsletter if I or any helper feel that the answer would be better shared with the ICPUG membership. If the query is not accompanied by the required number of envelopes then these may also be published in the newsletter if of sufficient interest.

For the next issue we already have two queries lined up. These being one on the XT bridge board on the Amiga B2000, and an article on adding a hard disk to the Amiga, or at least I hope so.

If you wish to send queries by EMAIL then my contacts are listed at the end of this article. Any EMAIL queries will be sent back on the same service as they are received.

Also I am looking for ideas for articles for future newsletters. Let me know of any topics for which you would like a technical analysis, and I will try to produce something appropriate.

Lastly, I would like to thank all those who have offered to assist on the help register.

Contact Information.

```
CIX       :        ID:  BAVIN
CNET      :        ID:  BGC1
EMPYRION  :  TEL   :  0792-580781
          TIMES    :  9PM TO 6AM
       PROTOCOL    :  8N1
         SPEED     :  V21/V23/V22/V22BIS
           ID      :  BAVIN CLARKE.

ADDRESS   : Inside the front cover.
```

UPDATE ON TIDY.C

by Richard Skinner

I've just finished typing in the example C code from the Jan/Feb '89 Newsletter (having only joined as recently as the June Commodore Show) and I do indeed have some comments and suggestions.

First of all there's a lot of totally unused stuff in there, most obvious being all references to anything to do with the graphics library. It's all very well opening the library, but it's generally accepted as pointless if you don't call any of the functions or access the GfxBase structure. 'sizing_gadget' is also not necessary. Your three lines involving this variable would be much clearer just as

```
if (FWindow->Flags & WINDOWSIZING)
```

Also concerning one of these lines, if you really want to use it, instead of

```
sizing_gadget = (sizing_gadget & WINDOWSIZING);
```

use

```
sizing_gadget &= WINDOWSIZING;
```

just like with += and -=.

Secondly, you use brackets in expressions far too frequently. eg

```
Next = (FWindow->NextWindow);
```

= has the lowest priority in an expression and -> has one of the highest priorities. Therefore = will never be evaluated before -> has taken effect.

Thirdly, (bit niddly this one), *FWindow only points to the first window in the window list once. It would probably have been better to call it CWindow for Current Window. I don't agree with the naming conventions mentioned in the May/June issue, (though I do agree with everything else raised there), except for assembler code where _ptr can be extremely useful for keeping pointer variables under control.

I noticed in the May/June newsletter that someone has already mentioned the incorrect usage of casting. I think I can clear up your confusion (I hope!). Here goes:

Casting is used to force the result of the expression to its right to conform to the required data type for use to the left.

First unnecessary usage:

```
AScreen = (struct Screen *)IntuitionBase->ActiveScreen;
```

When addressing structures the final element on the right (in this case ActiveScreen) is what defines the data type of the variable so addressed. As ActiveScreen is a struct Screen * as defined by intuitionbase.h, casting it to such is pointless. (And could be confusing)

Second incorrect and unnecessary usage:

```
FWindow = (struct Screen *)AScreen->FirstWindow;
```

Fwindow is a struct Window *, so trying to assign a struct Screen * to it is clearly wrong; and as FirstWindow is a struct Window * anyway no cast is required (as above).

Another good idea is not to try and hide what you are doing as with the opening of the libraries. Having the test for failure on a separate line makes things a lot clearer and makes 0% difference to the final code anyway (almost).

Okay, last point. The logic is atrocious! Apart from the very valid point about screwing the system if there are no windows, the last sizeable window in the list will not be stacked away, even if it's the only window on the screen.

I have rewritten the code and included it for you to look at, it does all sizable windows except the active one (it's very annoying having your current CLI disappear up the rear end of the text editor) and won't mess things up if there are no windows active.

P.S.

Any idea as to how to stop that load garbage being printed into the CLI if a certain number of windows are resized and stacked. It happens with your version as well as mine.

P.P.S.

It might be an idea to mention how you got your code to 4876 bytes. Did you use the suggested methods given on disk 4 of Lattice C Ver 4.01 in EXTRAS / TRICKS/, and if not, how did you do it? When I typed it in it was over a hundred bytes larger.

```
#include <intuition/intuitionbase.h>

/* only include these on Lattice C > Ver 4.01 they make the final code size
slightly smaller and faster */

#include <proto/intuition.h>
#include <proto/exec.h>

/* start Y position for the windows to be stacked at */

#define Y_WINDOW_POS 0

/* required general variables */

struct IntuitionBase *IntuitionBase;
struct Window *CWindow;
struct Window *AWindow;
struct Screen *AScreen;
int    pos = Y_WINDOW_POS;

void main();

void main()
{
    /* open the intuition library and if I fail get out */
    IntuitionBase = (struct IntuitionBase*)OpenLibrary(intuition.library,0);
    if (IntuitionBase == NULL)
        exit(1);
   /* prevent other tasks from messing with the intuition lists */
    Forbid();
    /* get the active screen */
    AScreen = IntuitionBase->ActiveScreen;
    /* get the first window on the screen */
    CWindow = AScreen->FirstWindow;
    /* get the active window so I know which not to resize and stack */
    AWindow = IntuitionBase->ActiveWindow;
    /* Okay, now the the loop that does the work. Goes through all the list of
windows until there are no more left. */
    while (CWindow != NULL)
    {
```



```
        /* this statement makes sure that only sizable windows are altered and
that the ActiveWindow is left alone  */
        if ((AWindow != CWindow) && (CWindow->Flags & WINDOWSIZING))
        {
            /* do the resizing and stacking business */
            SizeWindow(CWindow, 200 - CWindow->Width,
                               40 - CWindow->Height);
            WindowToFront(CWindow);
            MoveWindow(CWindow, 0 - CWindow->LeftEdge,
                               0 - CWindow->TopEdge + pos);
        }
        /* get the pointer to the next window or a NULL if we've just done
the last window */
        CWindow = CWindow->NextWindow;
        /* move the Y position to stack the windows at down and make sure I
don't try moving the windows further down the screen than they will fit */
        pos += 10;
        if ((pos + 40) >= AScreen->Height )
                pos = Y_WINDOW_POS;
    }
    /* move the active window to the front of the screen */
    WindowToFront(AWindow);
    /* allow other tasks to continue */
    Permit();
    /* close the intuition library */
    CloseLibrary(IntuitionBase);
}
```

ICPUG SOUTH EAST NEWS

by Janet Bickerstaff

Since our visit to Charmouth in April the Group have had a busy and interesting time. John Collins came to talk to us in May on the subject of Communications. It was a fascinating review of communications from the earliest times right up to the very latest news on the electronic mails of today.

On the second Thursday of the month we have started an Amiga Beginners Corner to help those struggling with the mysteries of the machine for the first time. The last Thursday of the month is Course Night. Having delved into the language 'C', some members have embarked on a project to jointly write a program to compare files.

The highlight of the year was the visit to Biggin Hill by Jim Butterfield on the 8th June. Over forty people crowded into the Library to hear 'The Guru'. It was nice to see so many members and also some new faces. Jim's talk covered all machines from the C64 to the Amiga, as well as all the latest news from across the water. After a lively meeting some members adjourned (as usual) to The Black Horse at Biggin Hill, where the discussions continued until the landlord dimmed the lights at 11.15!

Lectures planned for the future include the following speakers. On 20th July David Annal is delivering the second part of his talk entitled 'Drawing on the Amiga'. Part 1 of that talk brought the house down when, as part of a demonstration of DPaint III, the revered Chairman's head flew out of a cuckoo clock. On 17th August Joe Griffin, the ICPUG Chief Software Librarian, will be with us, followed by Simon Tranmer of Precision Software on 21st September, and Dave Parkinson of Ariadne Software on 19th October. Forthcoming events include a Friday Night Out on 11th August, when about 30 of us will be eating out Chinese style and, in October, some of us will be going on a long weekend visit to the Pyrenees and Lourdes. Those already booked for these events will ensure that a lively time is had by one and all.

This year's weekend of Computers and Gourmet Food at The Queen's Armes in Charmouth was such an outstanding success that repeat bookings have already filled the hotel and there is a waiting list for places.

South East Group welcomes members, new and old, to their meetings at the Library, Biggin Hill, Kent, any Thursday except the first Thursday of the month. Meetings start at 7.45 pm and end at 9.45 pm. ICPUGSE supports FAST (the Federation Against Software Theft) and copying of software was totally banned from our meetings some time ago. However, Public Domain software for all machines is available from software librarians on request.

TALES OF 128 WOE!

by Dai Hale

I was interested to read Joe Griffin's comments on the problems he'd encountered with the built in disk drive on his C128 desktop as I have experienced similar problems.

I first heard about the infamous 1571 bug through the ICPUG Journal; but trying out the test program which appeared in the May/June 1987 issue, I obtained altogether different results. My first reaction was, "Lucky me, this new desktop version is bug-free!" However, closer inspection revealed a new bug - writing to side two with a relative file open resulted in a "splat" file, with all data irretrievably lost.

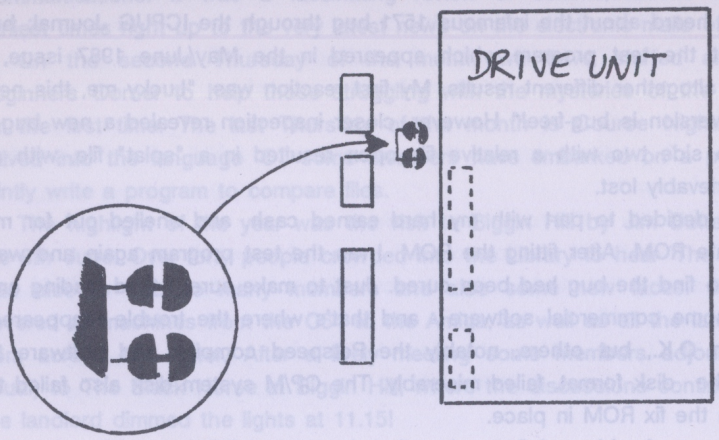
So, I decided to part with my hard earned cash, and shelled out for my first update ROM. After fitting the ROM, I ran the test program again and was pleased to find the bug had been cured. Just to make sure, I tried loading and running some commercial software - and that's where the trouble reappeared. Some ran O.K., but others, notably the Petspeed compiler and software to analyse the disk format, failed miserably. The CP/M system disk also failed to boot with the fix ROM in place.

Stuck now for ideas, I first re-installed the original ROM, and then decided to try the original suppliers of the machine for help. They were unable to offer any answers, but suggested I try the Technical Support Department of Commodore U.K. This I did, having to once more open the computer to give them the chip number; the reply to this was, "Are you sure? I've never heard of that particular version. I'll get back to you on it." After about a week, I rang again. "Oh yes, I remember. They were special ROMs made for the desktop version. Yes, the upgrade version should work but we'll try one in one of our machines. Ring back tomorrow." Consequently, I rang back the following day - "Yes, we've fitted an upgrade ROM into our desktop and everything works O.K. If yours still doesn't, then it could be a) you have a pirated ROM b) your CP/M disk is faulty or c) your disk needs re-aligning. I'll send you a new CP/M system disk just in case."

I tried all three remedies - the new CP/M system disk, another upgrade ROM (from a different supplier) and had the disk realigned - but still the dreaded bug remained! In the meanwhile, being totally clumsy, I dropped the computer, damaging the disk drive! There followed a wait of six months for a new disk unit to arrive and that's where I am today - back at the beginning. My computer works great, the disk drive works well provided I don't attempt to write to side two etc.. So, I look forward to further news about the updated

upgrade ROMs for the C128D desktop!

Device Change on the C128D



Necessity being the mother of invention and all that, due to the problems outlined above, I needed to define an external drive as device 8. Having taken advantage of the unbeatable offer on the 1581 drive through ICPUG, I had the necessary drive, but how to avoid conflict with the built-in 1571? Well, the computer case being off more than on, I examined the circuit board underneath the 1571 unit and discovered the answer. Just to the left (looking from the front) and about half-way between back and front are two sets of two semi-circular connections. Each set has a narrow connection joining the two halves together (see diagram). Now, by removing this connection with a narrow blade (I used a terminal screwdriver), the device number of the built-in 1571 can be altered - removing the one nearest the front gives device 9, the one nearest the back device 10 and removing both gives device 11. For an even better job where the device number is changeable, wires can be soldered onto these four semi-circles (though in fact, only three are required as two of them are common), and taken to a dual-in-line switch such as part number XX26D or JH09K in the Maplin catalogue. This switch can then be mounted externally on the casing of the computer - if you can bear to do the cutting required! However, you should remember that opening the computer casing does invalidate the warranty on the machine.

SPREADSHEET SUPPORTING A BOATING HOBBY

by M. D. G. Preece

Anyone reading this article could wonder why it was submitted to the magazine of a Commodore club. It is applicable to the use of any spreadsheet package on any machine. The only connection I can claim for it with the magazine is my membership of ICPUG, and the fact that my implementation was on As Easy As, a shareware Lotus 123 look alike, running on a Commodore PC1. It may however, be of use to anyone interested in boating on inland waterways, and even prompt others to identify ways in which their computing hobby can be applied to other hobbies.

My problem was route planning for our summer holidays, during which we were intending to cruise the River Severn and adjacent canals. In previous years we had always known which circuit we intended to do, and knew roughly how long it would take because we had previously cruised sections of it, and therefore only had to calculate timings on the back of a cigarette packet for the one route. This time we were starting from scratch, looking for suitable circuits lasting a given time, from which to select our route; the classic 'what if' situation.

The rules in the boating books are quite simple. For each leg of the route, count the number of locks and convert them to lock miles using the formula:

```
Lock miles = No. locks x time per lock x av. speed.
                                  (fraction of hrs)
```

Thus, on a canal on which one averages 3 mph between locks, and if it takes an average of 10 minutes per lock (1/6 hour), 1 lock is equivalent to 1/2 lock mile. Then add the length of the leg to the lock miles to produce equivalent distance. Divide by the average speed, and you have the time taken for that leg. The theory is simple but the calculations for one circuit lasting 3 weeks are laborious if carried out manually; if doing these calculations for a number of routes before selecting one, the task almost makes the holiday not worthwhile.

This year I set up a spreadsheet for the task. The blank version, before data for a particular route, is as in figure 1. For reference to the 123 formulae, relevant column and row identities are marked in brackets.

```
BOATING ROUTE CARD FROM ***************** TO:*** *****************
=================================================================

(4)             Default Av Speed:  4  MPH.
(5)             Hours Per Day:     5
(6)             Time per Lock:     10  Mins.

==============:===========:=====:=====:=====:=====:=====:=====:=====
FROM          :TO         :DIST :LOCKS:AV   :EST  :EL   :DAY  :DAY
              :           :MLS  :     :SPEED:TIME :TIME :     :TIME
   (A)          (C)        (E)   (G)   (I)   (K)   (M)   (O)   (Q)
==============:===========:=====:=====:=====:=====:=====:=====:=====
(12)          :           :     :     :   4 : 0.0 :   0 :   1 :   0
              :           :     :     :   4 : 0.0 :   0 :   1 :   0
              :           :     :     :   4 : 0.0 :   0 :   1 :   0
```

Figure 1

The values in rows 4 to 6 set the default averages for the whole journey. The speed and time per lock are those recommended in the Canal Book I use, and the length of day my choice of how long I like to spend on the move, all modifiable. The average speed is also copied into the Av Speed column, so that it only need be changed for those legs on which it is expected to differ. Then set the following formulae into the appropriate column on the first row (in my case row 12) in the main body and copy them into all succeeding rows. For those not familiar with a 123 type spreadsheet, if a formula containing a cell reference in the form K12 will treat it as a relative expression. Thus K12, when copied into row 13 will become K13. However, a constant value in that cell, shown as, for example, $K$12, will be copied into other rows without change.

a. Average speed is that set in at the top of the spreadsheet i.e.:

```
I12 = +$E$4 (Uses the actual value of E4).
```

b. To calculate the estimated time to complete the individual leg:

```
Est Time = (Dist+(Locks*time per lock*av speed/60))/av speed.
```

or in 123 format:


```
K12 = (E12 + (G12 * $E$6 * I12/60))/I12.
```

c. The elapsed time is the sum of individual times, or, in 123 format :

```
M12 = +K12 (for row 12 alone).
M13 = @Sum(K$12..K13) (for row 13 and succeeding rows).
```

d. To calculate the day on which the leg will be completed:

```
Day = Int (total elapsed time /hours per day) + 1.
```

or in 123 format:

```
O12 = @Int(M12/$E$5) + 1
```

e. Finally, the elapsed time, on the given day, at which the leg will be completed is:

```
Day time = Total elapsed time - ((Day - 1) * hours per day)
```

or, in 123 format:

```
Q12 = +M12 - ((O12 - 1) * $E$5 )
```

Having completed the blank spreadsheet, with the formulae and normal default values, and saved it (since this is the basic form for all trips), enter the details for a trip, and the trip timings are calculated. The level of detail, i.e. the number of legs, can be increased as a route is selected from a number of routes using coarser detail. "What if" calculations can then be performed by changing average values or the speed for a given leg. Part of a completed example is shown at figure 2.

```
BOATING ROUTE CARD SEVERN/STAFF & WORCS / TRENT / COVENTRY /
BIRMINGHAM / WORCESTER
=================================================================

                Default Av Speed:  4  MPH.
                Hours Per Day:     5
                Time per Lock:     10  Mins.
```

FROM	TO	DIST	LOCKS	AV SPEED	EST TIME	EL TIME	DAY	DAY TIME
		MLS						
RIVER SEVERN								
Kempsey	Worcester	3.5	1	4	1.0	1.0	1	1.04
Worcester	Holt Castle	6.0	1	4	1.7	2.7	1	2.70
WORCESTER & BIRMINGHAM								
Farmers Br Jn	Selly Oak	3.0	0	4	0.8	40.5	9	0.49
Selly Oak	Kings Norton Jn	2.5	0	4	0.6	41.1	9	1.12
Kings Norton Jn	Hopwood	3.3	0	4	0.8	41.9	9	1.93
Hopwood	Alvechurch Stn	2.0	0	4	0.5	42.4	9	2.43
Alvechurch Stn	Tardebigge Yd	3.8	0	4	0.9	43.3	9	3.37
Tardebigge Yd	Hanbury Pk	4.8	42	4	8.2	51.5	11	1.56
Hanbury Pk	Tibberton	5.0	0	4	1.3	52.8	11	2.81
Tibberton	Diglis	5.8	14	4	3.8	56.5	12	1.58
RIVER SEVERN								
Diglis	Kempsey	3.5	1	4	1.0	57.6	12	2.62
	Total	134	144	4	57.6		12	2.62

Figure 2

My wife has always been a little sceptical about the value of my hobby. When she saw the results for the first calculation using the spreadsheet she was frankly disbelieving of the results, pointing out that the circuit appeared small on the map for the time taken. Actually it had a high concentration of locks. I solved that disbelief by entering the details of the route we had done two years ago, and getting exactly the number of days of actual travel we had taken. Then, when we were able to try out four or five different routes in an evening, and agree our plans for this year, she began to feel that maybe computing in the home has some value.

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DATABASE FOR C128

by Tony Wright.

It is not often that you will find a review of a public domain program in this or any other periodical but I suggested and Chris Wright agreed that this one is a bit special.

Whilst it is not in the same class as Superbase it is, nevertheless, a very powerful and flexible program which will be available from the C128 library in June.

The first thing to do is to read or print the tutorial sequential file as this will give you an overall picture of the program but instructions are available when loading the main program. In addition, very detailed 'help' information is available at nearly every menu selection whilst in the program by pressing the F7 key and there are plenty of places in the program where it is possible to return to the main or sub-menu if you are off-track. Indeed it is difficult, if not impossible, to 'crash' this program.

As you will have guessed it is a relative file program and the number of records is, therefore, only restricted by the capacity of your disk. The Instructions do recommend that you use two disks and sets out which parts of the program and files should be on each disk. It is also possible to 'boot' the starter disk. Strangely enough, it does not give you the choice of upper case or upper and lower case but you can achieve this by pressing the Commodore and Shift key at any time but no earlier than the insertion and running of the data disk. When loaded the program displays a summary of the number of record numbers used, the number of deleted records and the number of characters per record. It also displays details of each field such as name, number of characters, whether alphabetic or numeric and, if the latter, the number of decimal places. Finally it displays the fields which are contained in the 'index' file. This program can be run in 40 or 80 column mode and it caters for one single drive, two single drives or a dual drive.

Now onto the actual program. After the above displays comes the main menu which is as follows:-

Create file	File menu
Add records	Directory
Load file	Index
View/Update	Reports
Exit	Output

The majority of these are self explanatory and follow fairly conventional lines but others require some amplification.

CREATE - as with all relative files this is the first part of the program you seek as it is here that your file of records is constructed and, in this respect, this program is no different from other relative file databases. It has, however, a very friendly form of entry and the ubiquitous 'help' file tells you that field names can be up to 10 characters long, that field data can be up to 80 characters long for alphanumeric fields and 9 characters for numeric only fields and that you may enter a maximum of 100 fields in each record. When entering the field names it is possible to use the UP and DOWN cursors to change the details of fields already entered before finally committing yourself to having the file constructed.

FILE MENU - on selection of this option you are given a further menu which enables you to rename files, change fields, empty files, get and put sequential files (i.e. read data off seq. files or save out to WP fill files), Field calculations (i.e. a separate menu to create, add, delete and view the existing range of calculation formats), hunt and replace (by any pattern in any field), backup file, delete file, initialise disk, validate disk, sort file and format a disk. Sorting the records, for whatever reason, requires that a new file is created with a new name but you are allowed to retain the original file should you need it. Sorting can be done on up to 3 fields concurrently.

OUTPUT - on this selection you are offered the facility of changing the screen colours, selecting disk for output, counting and totalling the contents of specific records and changing the printer configuration. This latter is extremely powerful and you can use all your printer's codes to secure whatever style, size or density of type you require. This is then stored as a permanent feature on disk as a file and loaded every time the database is accessed until, of course, you find a need to change it.

REPORTS - this facility gives you a choice of reports or labels and really deserves an article on its own. Suffice it to say that whatever you imagine you could want in a report is available. Not only a choice by four different methods of the records you want to access including a very sophisticated 'super' search which ranges from 'equal to' over 9 choices to 'contains' when related to the contents of a field, but a sort facility which enables the selected records to be sorted to a priority level of 3 fields. When you have prepared the headings in the form you want them and selected the data to appear you are presented with a small printed 'example' to approve before you go ahead. This, coupled with the range of print options already referred to appears to satisfy all needs including wide-carriage printers. Similar facilities are offered for the labels

although, of course, these are not as extensive. Report formats and label formats may be saved for future use by giving individual names to each format file.

VIEW/UPDATE - although this may be pretty obvious it is interesting in its layout. On selection one is taken into a search menu, which has also been mentioned in REPORTS. This enables you to select on record number, index, fast search using detail in any field or the super search already referred to in REPORTS. When the selected record is eventually displayed on the screen you are given the options of back, forward, search (for another instance), update, delete, print or repeat.

INDEX is worth a mention. It is possible at any time to delete the current index and build up a new index by specifying different fields. The fields are given priorities and you can have a maximum of 3 fields in the index.

Moving about the menus is easy. All menus use the system of choosing the first letter of the desired option which is always highlighted. Access to help files is provided by pressing the F7 key instead of RETURN after selecting the option character. In all cases when a menu is displayed you are also offered the choice of returning to the previous or main menu. Most choices are simplified to a straight 'yes/no'. All record data, whether being added, changed or deleted is confirmed by pressing the F1 key as is the selection of index fields and search fields. Use of the 'RETURN' key is minimal in this respect.

CONCLUSION

I have not covered every facet of this database program as it would require many more pages than would be reasonable to allocate in our Newsletter. In any case, one can never know which parts are the most important, everyone has their own likes/dislikes in this respect, but I have come across few, if any, database programs which are able to offer the ordinary computer user such a wide range of facilities and yet retain a degree of user-friendliness which is quite impressive. This coupled with a very tidy screen layout and the ability to access very useful 'help' screens at every turn makes it one of the best databases I have encountered both Commodore or non-Commodore (you should try Cambase on the Amstrad PCW if you want convincing). Yes, Mr. Editor, I will wash my mouth out.

SUPER * CORNER

Edited by Brian Fowler

As I have mentioned before, I use a 128D (with built-in 1571 drive), together with a 8250 drive connected via a Brain Boxes 64/128 interface cartridge. Both drives are device 8 at switch on, but the 8250 automatically takes precedence and disallows access to the 1571.

However, using the following short procedure, I can start the machine and it will automatically run a configuration program which will change the 8250 to device 9, thus allowing use of the 1571 as device 8.

Now, the 128 has an autoboot feature, and when turned on or reset will look for a boot program on drive 0, unit 8. You can put a boot program on your own disk by using a program supplied for that purpose on the disk which comes with the machine. Following the instructions, have your boot program load and run the following short basic program.

```
10 rem ******************************************************
20 rem *                                                    *
30 rem *                      startup                       *
40 rem *                                                    *
50 rem ******************************************************
60 color 5,1 :color 6,16
70 z$=chr$(0): b$=chr$(2)
80 f=8
90 t=9
100 gosub 120
110 goto 410
120 close 1:open 1,f,15: if st then 220
130 print#1,"m-r"chr$(255)chr$(255)
140 gosub 200: gosub 250
150 print "[down] unit-type/dos vers: ";a$
160 print#1,"m-w"chr$(m)z$b$chr$(t+32)chr$(t+64)
170 if st then 220
180 print "[2 down] device";f;"changed to device";t
190 return
200 get#1,c$: c=asc(c$+z$)
210 if st=0 then return
220 print "[down] device error on";f: goto 240
230 print " unknown device type";f
```

```
240 close 1: end
250 if c=198 then m=12: goto 330
260 if c=255 then m=12: a$="d90xx / v3.0"
270 if c=254 then m=119: a$="1571-1541/v3.0-2.6"
280 if c=242 then m=12: a$="8050 / v2.5"
290 if c=241 then m=12: a$="1551 / v2.6"
300 if c=226 then m=50: a$="2040 / v1.2"
310 if c=213 then m=12: a$="4040 / v2.1"
320 return
330 print#1,"m-r"chr$(234)chr$(16)
340 gosub 200: if c>1 then 250
350 if c=0 then a$="4040 / v2.7":return
360 print#1,"m-r"chr$(172)chr$(16)
370 gosub 200: if c<1 or c>2 then 230
380 if c=1 then a$="8050 / v2.7"
390 if c=2 then a$="8250 / v2.7"
400 return
410 rem 128 80 column startup
420 fast
430 boot:rem ** whatever's in drive 8 !
```

After changing the screen colours, the program then changes device 8 to device 9, reporting its success on screen. The computer is then put into fast mode, and the disk in device 8 (the 1571, now) is booted. By putting the Superscript distribution disk in the 1571, and a 'boot' disk as above in the 8250, the process of changing device numbers and loading Superscript is reduced to nothing more than turning on the power switch.

John Ruffel, a sb/ss 64 user, sent me a letter mentioning the fact that he had submitted disks for publication to a previous editor of Super* Corner, but the disks had been returned to him without comment. John wonders if any of this material was passed on to me.

I DO NOT HAVE ANY MATERIAL FROM MEMBERS EXCEPT THAT RECEIVED SINCE I TOOK OVER THIS COLUMN.

Please, therefore, if your material has not been published, kindly resubmit it to me. Whilst I do not guarantee it will be used (especially if it is more than three lines and does not come on disk), I will return it to you as long as you include sufficient return postage, and if the material is not suitable I will tell you why

that is so.

John also makes the following point :

"From your initial article, your personal interest is obviously not with 64 users particularly, and you state that the 128 is no match for the Amiga, but please do not forget the 64, and although that may be even slower, the economic fact is that it is a lot less money. There are nearly 50 percent of the membership with 64's even if some do also have Amiga's! Also my guess is that of that 50 per cent, half will have a copy of Superbase, and possibly Superscript."

OK, OK, as I said last time, this column will support all the machines it can, but to do that I must have contributions from those members who use the older machines (Joe Griffin isn't the only one, surely ?).

John Ruffel enters into the spirit of things with this offering :

"When an address database has been set up it is sometimes convenient to print out a simple label, rather than using the label program available from the program disk. The following simple program will do this :

```
50 file "members"
100 print across
110 select k
120 print  &[1]&[2]&[3]&[4]&[5]@1,0@1,0@1,0@1,0
130 menu
```

Notes on the above program, which I save as "single label"

50 - file name to be changed according to file name in use
110 - causes screen request "Key?" Enter Key (probably Surname or however the database has been set up) for label required. Make sure your printer is ready!
120 - The numbers have been added to the format of field names eg Name 1, Street 2 etc. This makes for a shorter program.
130 returns screen to Superbase Menu 1 and by pressing f7 you can 'Execute' another single label if so desired.
Thanks to John for the above.

Jill Dick sent in the following article, which has a number of useful hints, and a 'mini-competition' with a rather intriguing prize on offer !

I DO IT MY WAY

by Jill Dick

"Send in your programs," you beg users of Superscript and Superbase. What, even mine? They're so short and simple - there will be hundreds of members out there who'll skip over them with sighs of "Grief! Is that all she's learned after years at the keyboard?" But you've asked for it - so here goes with a sample batch of bits and pieces I use daily. Old-hat they may be to many folk, but they're invaluable to me and serve me well. Perhaps they, or something based on them and bettered, will help other members too. (Actually I'm not as daft as others may think: in acknowledging my own shortage of programming skills, which I most readily do, I'm trusting others more advanced will hasten to improve them: scorn doesn't bother me, while greater ingenuity in programming would please me no end.)

I work on a 128 (upgraded some years ago from a trusty 64) with a 1901 monitor, two 1541's and one 1581. The latter has brought great joy, and all the programs below are designed to run on it in the milieu in which I work most of the time - Superscript on a 1541 (oh, that unbearably slow loading) and the Superbase program with a single database, its offspring files and data on individual 3 1/2 disks in the 1581.

For the purposes of this copy I'm referring to one particular disk holding a large database with at least one file of some 1000+ records, as well as one or two other smaller files. The big file format has ten fields (I keep many files to this format so they are readily interchangeable with others in other databases): the first (key) field being a surname, then name, five address fields and telephone. The last two fields are for business details, buying habits etc.

But before we start on Superbases, here are a few of the command strings which make life so much easier and show their true worth every day:-

```
*1=^mSbase: Screen 1? RunStop + b^m/tt      2? RunStop + Q/gs
*2=^mSbase: screen 2? RunStop + Q for access/gc/gs
```

(See below for more about command strings *1 and *2)

```
*8=/duu8: rem access Unit 8
*9=/duu9: rem access Unit 9
*b=^mCheck Sbase is in Unit 8 and press RETURN/dus: rem load Sbase
*B=/eb: rem erase block
*d=/ab: rem define block
*e=/el: rem erase line
```



```
*m=/am: rem move block
*n=/pvf: rem view from page number
*p=^lnp^m: rem force new page
*Q=/qy: rem switch to Superbase
*U=/fus: rem underline on
*u=/fue: rem underline off
*z=^j^y^y^c^u^d^j: rem erase unwanted return at end of line
*^=/gu: rem go up
*==/gd: rem go down
```

Please note Command Strings *1 and *2 display text designed to stop losing Superscript altogether by unthinkingly trying to move into Superbase, only to find it's not loaded. Oh the frustration of having to start all over again with that agonisingly slow loading and switching! So when on Screen 1, command string *1 takes you on to loading Superbase, and when you're on Screen 2, command string *2 tries to get into play area 1 before moving into Superbase. If it can't, it must be that Superbase is already loaded.

Here I should mention I mainly use a Star NL10, a great little printer, and am doing so for the purposes of this copy. For reasons other than Superscript/base (viz, special graphics used in other systems) it is set not to deliver a line feed, meaning all my programs must supply one if needed.

And so to the first program - a "start" prog for a database disk which goes straight from the Superscript "Insert data disk" to Menu 1 with the main database file loaded. Like many of my programs it's not original, by any means. This one is shamelessly culled from and based on the original start prog on the Superscript disk - and I begin with it as it shows how anyone can start 'getting to work' with nothing more arduous than a command string (see above) and a couple of Returns:-

```
10 rem Superbase start program
20 cols a:c=0:if a=80then c=20
30 brkon:gosub 130:rem  allow break key and set system parameters
40 l$="                    .":l$=l$+l$:l$=left$(l$,17)
50 display @10+c,7"."+l$+"."
60 display @10+c,8"."+" Superbase 128 "+"."
70 display @10+c,9"."+l$+"."
80 display @0:rem reset display count
90 display @9+c,13" Database Name : DRC "
100 display @10+c,16"File name : buyers"
110 display @8+c,19"Press RETURN to continue":wait
```

```
120 database "DRC":file "buyers":menu
130 rem *** set system parameters ***
140 lmarg 1:rmarg 80:rem margins
150 plen 66:tlen 60:rem page & text length
160 pdev 4:pdef 0:rem printer device 4 cbm code
170 lfeed 0:cont 1:rem no line feeds, continuous print
180 space 0:across
190 screen 0
200 return
210 save "start.p
```

Lines 90 to 120 select the database and file, with "Superbase 128" in a neat box above. [Editor's note: Graphics characters in lines 40 to 70 could not be printed using Vizawrite, and were replaced with dots.]

Incidentally, what a struggle it was to get that program listed on a disk to send to our illustrious editor! Print it out or display it - no trouble - but put it on a disk? Am I the only ICPUG member who didn't know how to do this apparently simple task? "Open filename" is described on p 32 of the Superbase manual, but no way could I get it to work - until I tried putting the simple instructions on one command line:-

```
OPEN "filename": LIST:CLOSE.
```

The easiest things are hard - until you know how! (I offer a prize to anyone who can tell me the solution to the small problem at the foot of this copy.)

Now for another problem-solver: counting the number of items in a list after a 'find' exercise. Have you ever counted the number of screens you can flash past, trying to recall whether it's 22 or 23 items per screen, and then added on any left over that don't make a whole screen? Never again.

```
10 rem program "makelist&count.p"
20 rem to make list, count and display number of items on list
30 rem 03jun89 = date of last modification
40 rem change line 50 as required
50 find""where [1]is"fy"
60 count x
70 display @5,5"Records listed =";
80 display @23,5;&3,0x:wait
90 if x=0then display @23,5;&3,0x;"NIL":wait
100 save "makelist&count.p"
```


Maybe you've already got a "list" and want to count its records? Here's how:-

```
10 rem program "counth8list.p"
20 rem prog to display numbers already on "h8list"
30 rem 03jun89 = date of last modification
40 count x:display @20,5"Records counted =";@38,5;&5,0x:wait
50 if x=0then menu
60 save "counth8list.p"
```

By the way, another tit-bit that's greatly underplayed in my opinion, is the use of Area Table, and in putting these programs into Superscript from Superbase I find it ideal. The programs listed here did not share the same left margin as the text when I inserted them into this copy. The simple solution? Encapsulate the program lines with Area Table, move them bodily to the left until they line up as required, and press Return.

Letter-writing, sending out accounts and generally keeping track of work for a large publishing house take up more time than I'd like them to (I'm a journalist and journalists should be writing, not playing with computers) so I have numerous ready-made Superscript templates which can be loaded and "filled" as required. But for making special contact with a reader whose details are on a Superbase file I've developed the following program that works on a variety of special templates. Perhaps your needs are similar and you can adapt it to them:-

```
10 rem prog "ssletter.p"
20 rem actual record is called "h8record"
30 rem 03jun89 = date of last modification
40 print down
50 open "h8record"
60 detail [name][add1][add2][add3][add4][add5];
70 close
80 superscript ,"^&i":close
90 rem i=letter, w=          , k=          , x=
100 save "ssletter.p
```

In line 80, "i" refers to the command string calling up the letter template, while "w", "k" and "x" may replace "i" to bring in other documents on various occasions when they need to be completed with recipients' names and addresses. In none of these instances is a 'merge' program of any use. This program makes an h8 file (I make almost everything into an h8 file for easy

checking) holding just the current Superbase record, and then loads the letter template into Superscript, putting the record in at all the right places. To make it work the letter template (and all the others) must have line 4 for the date, lines 8 - 13 for the recipient's name and address and line 15 for "Dear So-and-So" - which I prefer to complete individually as I'm on first-name terms with some recipients but not with others. My name is repeated at line 39 and the documents end at line 43 where there is a *np and the recipient's name and address is repeated for the envelope or address label.

I end with a simple program that saves me a good deal of time several times a day. One of my constant frustrations used to occur when consulting a Superbase name-and-address file and wanting to print a label of nothing but the record in front of me - quickly. This little program does the trick and prints in nlq (on my Star NL10) at the correct place on the label. Maybe there are simpler ways of achieving the same thing: but until someone writes to correct me I'll stick to this:-

```
10 rem program "quicklabel.p"
20 rem for labels of single records for envelopes etc - in nlq
30 rem 03jun89 = date of last modification
40 rem printing name and address only from record (at col 2)
50 p$=chr$(27)+chr$(120)+chr$( 9)
60 print p$:lfeed 1
70 print @2&[name]@2&[add1]@2&[add2]@2&[add3]@2&[add4]@2&[add5];
80 display
90 save "quicklabel.p"
```

After all this you may not believe I am very methodical in keeping records. So on every database disk I keep a Memo of 'how things are', thus:-

```
1032 "buyers" file records  03jun89 = date of latest update
352 "others" file records  03jun89 = date of latest update
"tempfile" may be emptied
```

And my prize-winning problem? I have Superscript with or without Superbase working in the 1581 drive as (8) and another disk in one of my 1541 drives as (9). But to read the directory of (9) I have to switch off the 1581 and switch on the other 1541 as Unit 8, take the disk out of (9), insert it in the 1541 Unit 8 and read it in the normal way. Then - to get back to work - the whole thing has be done again in reverse. Surely, surely there must be a simpler way of reading the directory in Unit 9? Oh, the prize? Well, what has a simple woman got that a gentleman (apologies, ladies, but we see all too few of us in these pages) could possibly want?

In the above I bare many of my shortcomings, but maybe you, like me, are learning as you go along and this copy will be of some use until you become Bruce Hunt II or another Jim Butterfield.

Now all I have to do is sit back and wait to be told just how I "could do better".

Well, that's Jill's article, and I'm going to give the following answer to her puzzle : Simply do (f1)duu9 and you change the logged drive to unit 9. Request a directory, and to change back just do (f1)duu8. It works with my version Superscript 128, so I claim the prize. What has a simple(!) woman got that a gentleman could want - more articles like the one above, of course! [Hmmm! - Ed] I look forward to receiving Jill's next offering. I do hope that next time she remembers to strip out all her formatting characters, though.

And finally - for this issue at least - a timely offering from Joe (half a bit missing) Griffin :

USING SUPER* WITH MULTIPLE DRIVES

by Joe Griffin

Superscript originated with the PET and Superbase came with the C-64. Both these programs allowed the user to access more than one disk drive. When starting the original Superscript, Superscript 2 or Easyscript the user was asked to supply the disk unit number. This could be any valid device number in the range 8 to 15.

Unfortunately, in my opinion, when Simon Tranmer produced Superscript 3 for the 64 and 128 he made two annoying changes from previous versions. Firstly he omitted the ability to load a disk directory into the program. While this can be done from BASIC, it is annoying to have loaded the program, only to realise that you have got to exit again, because you have not yet made a SEQ file of a disk directory. Secondly, Superscript allows the user to access devices 8 and 9 only. Again, this can be overcome by pre-planning but why-oh-why did Simon restrict the choice to 8 and 9. His later product 'Super Discdoc' allows 8 to 11 and Superbase allows any unit number.

When considering the way in which Superscript & Superbase handle disk

commands, it is important to grasp the concept of a logged-in disk drive. Both programs default to drive 0 of device 8. Superscript can set both unit and drive with menu commands. Once set, file loading and saving will be from that disk drive. With Superbase, the user logs in to a particular drive by specifying it within the DATABASE command string.

There is one small difference between the two programs in their handling of the logged drive. Superscript will only list the directory of the logged drive of a twin drive unit, Superbase will display the directories of the disks in both drives.

In the Superbase manual, there is little mention of device numbers and one serious omission is that there is no indication that MAINTAIN operates on the currently logged disk drive. Hence within Superbase, one can header a disk in unit 9, using MAINTAIN NEW DISK, but only if the user has first selected a database on unit 9, by issuing the command DATABASE dbname,9,0.

Superbase V3.0 has an extension to the IMPORT and EXPORT commands. In earlier versions of Superbase, you could only use these commands to transfer data on the same disk drive. Thus if you were fortunate to have a 4040 or 8x50 drive connected to your computer, you could use EXPORT 1:dbase.exp to place the export file on drive 1 of a twin drive unit. If however you were limited to a single drive (1541/1571), then the exported file had to be on the same disk.

With Version 3, Precision have given the ability to export and import across drives. While on the 8250, EXPORT 1:bdase.exp still exports from the logged database on drive 0 to drive 1; using EXPORT 8:dbase.exp will place the file on drive zero of device 8, irrespective of the currently logged drive. Sadly although the logged drive can have any value, target devices are limited to either 8 or 9.

Backups and Data Security

Firstly let me define what I mean by a BACKUP. For the purposes of this article I will define a backup as an identical copy of the disk. In general backups can be made with a single command on dual-drive units or by running a utility program on single drive units. A number of commercial copiers allow users to make backups using two single drives.

I will define a SECURITY COPY of the data as a complete copy of all the data required for the database. This data need not be stored in a form which can be immediately used but it must be possible to reconstruct the database from the stored information.

For users of dual drives, the internal facilities of the drive are the obvious

method of making backups. The remainder of this article concerns users with one or more single drive units. The user has two methods of making backup copies of the database files. From inside Superbase the MAINTAIN BACKUP command can be used. The disadvantages of this method are that it is slow, with a lot of disk swapping. However it is a very reliable method, in my experience. Even if the user has two drives attached to the computer it cannot backup between devices.

It can be done, outside Superbase, using some form of disk copier utility. For the C-128 Commodore supply the 'DOS Shell' program (which I have found fairly unreliable) and for the C-64 there is 'sd.backup.c64'. With the 1581 they supply backup routines for both computers. Various other copier utilities exist, including some commercial products.

In order to make security copies of the database, three methods are available, depending upon the exact hardware configuration.

Firstly, the user can export the data to a sequential file, then use a file copier ('unicopy' if there is only one disk drive on the system) to copy the export file and screen definitions to another disk.

Secondly, if a second drive is available and if Superbase V3.0 is in use, then the data can be exported to the other device, using EXPORT 9:database.exp.

Finally, the UTILITY program supplied with Superbase can be used to copy the entire database across to another disk, either on the same or a different drive. This method, while time consuming does have the advantage that you end up with a working database on the new disk and that corrupted databases can be recovered.

My own methods

I run databases on two different drives, according to need. On the 8250, I merely backup from drive 0 to drive 1. For the 1581 I use Commodore's 'backup128-1581' program which came with the drive. It uses the RAM pack, so does not require much disk swapping. I have tried using a number of commercial copiers with varying rates of success. Those that I have tried do not utilise the RAM pack, so disk swapping is involved.

I do not use the 1571 for databases. Having fixed the bugs in the drive and released the Version 5 ROM, Commodore brought out the cost-reduced version of the 128D, and sure enough, it corrupts Superbase databases. (See my article in the March/April ICPUG thingie).

A SIMPLE NEWSLETTER RACK

by Mike Hatt

Some years have passed since Fred Offler, famed for handy projects, outdid Blue Peter with ideas for using coathangers (in case your imaginations are running riot, Fred bent up a nifty stand for the 1541 disc drive to cure overheating problems by giving some air space below it). Well, the time has come for yet another ICPUG member to talk about something he has prepared earlier, and who more suitable than the Mad Hatter? Actually this article is by popular demand from those who have seen my perfect solution to the problem of storing your ICPUG Newsletters, computer manuals and anything about A5 size. Perfect? Well, look at the early stages and you will be convinced.

Walk into any supermarket and you will go straight past the ideal receptacle for a couple of years' issues of the Newsletter or up to 8 hardware or software manuals... yes, that boon to party hosts, the three litre wine box! So step one is - buy three litres of a suitable wine in a suitable box. The important point at this stage is to make sure the box is deep enough for the books or magazines you have in mind; some aren't the usual shape, so you may have to indulge in a sort of Thurber interlude: 'Yes, a sturdy box and with good depth...' This could be the ideal occasion for infuriating any self-styled wine experts you know...

For drinkers of British wine, Rougemont Castle is ideal for the ICPUG Newsletter, and the various Stowells' wine boxes are also suitably deep, although the black tops may be harder to cover up at a later stage. Some books and manuals need at least this depth, so if in doubt, have a surreptitious measure and get some really old fashioned looks from the shoppers! Of course, it will help stage two of the process if you buy a box containing wine you or your friends would like to drink.

Yes - the second step is to dispose of the wine. I hope I can leave this to your initiative, although I would be willing when free to attend any local groups' evenings when this process is being attempted... If you get involved in running social events for various bodies from time to time, there are often opportunities to make off with the odd empty box (with luck not quite empty) and commence at step three below. At this point it should be stressed that no one should be allowed to mess around with or particularly to open the TOP of the box, otherwise the project could be ruined.

Take your 'empty' box, and TURN IT UPSIDE DOWN. If you find yourself upside down, you contain too much of the wine yourself and should leave everything until later. OPEN THE ORIGINAL BOTTOM OF THE BOX

CAREFULLY - most of them are held together with dabs of glue and come apart easily. Carefully push the tap back into the box and remove the plastic bag; carefully remove the handle from the former top, which is to be the bottom of your magazine box (the holes don't matter because they won't be seen).

Now you can commence step four - cut the flaps from the opened end and cut away about two thirds of the front down to a horizontal line, leaving a good sized front area for marking the Newsletter editions or whatever you like. NOW you can see why you had to turn it upside down to start with - the part of the front you have cut away should have the tap hole in it! If you have got it wrong, or some goop opened the top before you could stop him, you may be able to salvage the box by glueing some paper or card across the tap hole area which is always weak and often bent about. You should now have your basic box ready to take two years' Newsletters or whatever, but before proceeding to discuss neat finishing touches, a digression about the plastic liner...

Step 3A and/or 4A, so to speak, may be to hear wine sloshing about and to investigate further. This is one case where the work itself may not be the only reward - with any luck you can squeeze a couple of good glasses of wine out of the bag! Those readers with dogs may find an inflated wine bag makes a good toy until those teeth deflate it, but a three litre wine bag also makes an excellent swimming float - press the button to blow it up, release to keep the air in, press the button to deflate it and fold it away neatly after the training session. Just right for improving those leg movements on the crawl. I really have done this in past years!

Back to the box, and step 5 - decoration. Get some Pritt Stick or similar glue and some suitable covering paper. Xerox copies of the Newsletter cover from one of the lighter covered editions are an obvious idea, but make sure with dark-marked boxes like the Stowells ones that the box markings don't show through the paper you use (you might need a layer of blank paper first). I found a big Precision logo on one of their handouts and Xeroxed it to cover a box in which I keep my Superscript and Superbase manuals and book - I hope the Tranmer brothers won't mind this, as it's good publicity for their company standing neatly next to my 4040 drive and C64.

For manuals and so forth, pick up some spare leaflets for your machine from the Commodore stand at one of the shows - you can usually use them, or sections of them, to get a Commodore logo on the front and pictures of the machine on the sides and back as well if you want it. The same applies to other makers' products - I've done a combined Commodore PC-1 and Star Printers box to stand between the PC-1 and my Star SR-10, with all the

computer, DOS, GW-BASIC and printer manuals. It has the two companies' logos on the front and pictures of the PC-1 on the sides.

The best method of working is to cover the front first, then the back, and finally make panels more or less cut to size for the sides. It may look neater (especially to cover uneven cutting) if you turn a certain amount of the covering paper over the edges to the inside or bottom of the box, but if you do, make sure it is well glued down. I don't often line the inside - it won't be seen when it is full of books or Newsletters - but you can if you are keen. For Newsletter issues and so on I use Dymo or similar tape to save time and cost, but remember there are Letraset type characters and other types of decoration available. The only limit is your imagination and the sort of effect you want.

So there it is - your finished Newsletter or book box, standing on the desk or shelf next to your computer. Why not celebrate by going to the shop and getting another box to start drinking your way to the next couple of years' Newsletters... Just remember to keep it all well away from the keyboard and those disks you haven't backed up - oh! - splosh! Too late....

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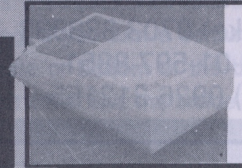

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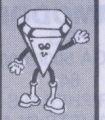

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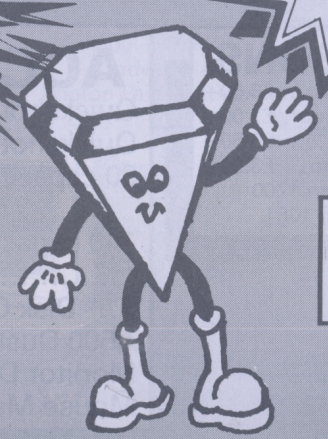

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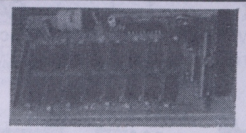

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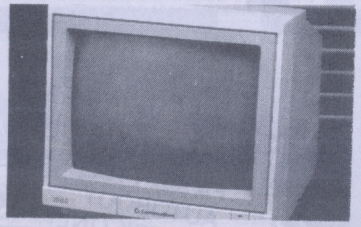

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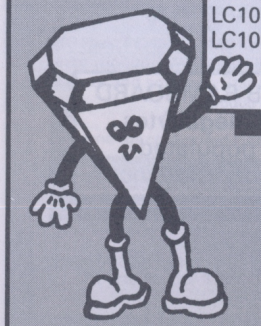

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Text Pro	£34.00
Textcraft +	£34.00
Vizawrite Desktop	£69.95
Wordperfect 4.1	£159.00
Write and File	£69.95

PC LIBRARY

by Don Skene

After a certain amount of delay on my part, due to holidays and machine repairs, the PC library seems to be running smoothly. Eight members volunteered for 360K copying, but by then Peter Crowder had volunteered (?). [His original offer had been sent on holiday for two weeks by the Post Office, after which he went and did likewise! - Ed] Thanks all the same and after a trial period we will see if any more copiers are needed to share the load.

The catalogue disks are now much more detailed, the library disks themselves are more fully packed with material and there is less wasted disk space, thanks to Tim Arnot.

I am now looking at the library with a view to publicising what I find is the most useful. This will inevitably have a strong personal bias and any comments on your own experience will be very welcome. Please also let us know if you find more up to date versions.

GOLDEN PERIOD FOR THE C64

by David Miller

At the end of 1982 CBM introduced the Commodore C64. Very little information was available for quite some time to the public, but for ICPUG members the newsletters of Vol 5 onward contained a host of useful information that is still of great value today. Articles in these issues were by Brian Grainger, Mike Todd and Jim Butterfield, just to mention a few. They include First Impressions, Bit Map Mode Display, Listings on Hi-Res Graphics and Character Display Mode, 64 Rom Listing (very comprehensive) Character Set Redefinition, VIC Address Map, CHR$() and POKE values in graphic and text mode plus lots of other very useful information.

This is just a short appetiser from the 1983 editions of the ICPUG journal. Obviously many articles on the other CBM machines are included. If you thin that these issues would be of interest, get in touch with the membership secretary and snap them up before they all go. Prices include post and packing and are as follows :-

Issues 1, 3 and 5, at £1.25 each; issues 2 and 4 (130+ pages) £1.50 each.

DISCOUNT CORNER

by John Bickerstaff, the Discount Officer

Please refer to pages 64 to 67 in the January/February issue for GENERAL INFORMATION and specific discount information. Refer to pages 162 and 163 in the March/April edition and pages 264 to 266 in the MAY/JUNE edition for specific discount information. Do look at the items in this edition - some facilities have changed even since the previous issue.

CBM Hardware is available to members at discount rates. Call for details. News for Amiga 500 owners is that the A590 hard disk with RAM card is scheduled to appear very soon. The price is an amazing £399 including VAT with 0K on the RAM card, which card takes 1 megabit CMOS chips. If you use NMOS chips you will void your warranty. There is a SCSI connector on the rear of the unit which enables more drives to be connected. Auto Booting is available for those with 1.3 Kick Start ROM machines. Those with 1.2 Kick Start ROM's will need to boot from a floppy disk.

These units, which are produced in the Commodore Hong Kong factory, seem to be competitive in price although the drive access may not be as fast as in units available from non Commodore sources. The documentation is said to be good! and a PARK facility is available. There is a utility called HDToolbox for use when adding further hard disk drives to the unit. Maybe the price of CMOS RAM chips will soon fall; you can add a further 1 Megabit at a time and finally achieve a 3MB machine when fully populated (and the A501 installed).

Bytes & Pieces. This company is now the official European Distributors for the North American comapny SPIRIT. For the A2000 Amiga they can supply a 20MB AutoBoot hard disk drive for £299 inclusive, plus carriage. The price for a 40MB unit is £399 again inclusive. There are several configurations depending on where you wish the hard drive to be installed. For the same machine there is an 8MB RAM card at £460 with 2MB RAM installed (1MB chips of course). For you A500 owners there is an INTERNAL RAM card of 1.5MB at £299 which enables a total RAM of 2.5 MB. See page 64 for details of address and phone number.

Consup Limited have moved to Lyntad Court, Grosvenor Terrace, London SE5 0NP with a new phone no. - 01-703 0011. Your contact is TAD.

Crime Core Ltd.

This company has agreed to allow members about 10 percent discount on any orders placed with them for any security equipment that they provide. They offer typically Intruder Systems but supply many other 'security' products. Please contact Mr. Jeff Howlett on 0733-332322 or write to him at Westwood Industrial Estate, Ivatt Way, Peterborough, Cambs. PE3 7BP. Our thanks go to Norman Philips for this introduction.

Diamond Computer Systems Ltd now have three operating centres with special contct at each of these. Call Mike on 0703-338933 (Southern) or Mark on 01-597 8851 (London) or Mike on 0926-312155 (Midlands) for the latest news and prices.

ICPUG Special Offer.

ICPUG have a small number of VIC items available for a donation to the Club funds. An Introduction to BASIC - Part I (cassette) is £2.00, plus £2.00 post and packing. A Super Expander Cartridge with additional 3K RAM and High Resolution Graphics Pack is £2.00, plus £1.00 post and packing. Please ring John Bickerstaff to check availability of stock. We have a greater stock of 1010 Expansion Modules for the VIC. These are £11.50, plus £3.50 post and packing. Please send your orders to the Discount Officer at 45 Brookscroft, Linton Glade, Croydon, Surrey CR0 9NA. Please make your cheque out to ICPUG and write your bank cheque card number on the back.

Nova have just brought out their second issue of NOVA, a disk based magazine. They are continuing to offer members a £1 discount on each issue making the cost to ICPUG members only £5.00 . The future issues consist of three disks. Please refer to page 163 for the contact address.

The Electronic Workshop are offering members their AMDRIVE and MINIGEN at special discount prices. Their 30MB hard disk drive for the A500 is £369 or £435 for a 46 MB unit. The Minigen is £102.35 to members. All products include VAT and delivery by carrier in the UK mainland. Extra prices apply off shore. Orders should be placed through the Discount Officer with cheques made out to Applied Systems Developments Ltd. Please send a 19p stamp with your order, thanks.

Discounts pages on the nets - Compunet GOTO ICPUG Micronet *icpug#

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READERS WRITE...

Editor's note: Letters for publication must be sent to Brian Fowler (address inside front cover) to arrive no later than one week before the editorial copy date. Please supply your letter on disk, with an accompanying printout.

M Ogunbor writes from 99 Ball's Pond Rd., Islington, London. N1 4BL, about a little problem with "Power Windows". It is easy enough to do the necessary using Lattice, but as I [Letters Ed, that is] don't have Power Windows, I can offer no help with that product.

I am learning to write "C" language with Lattice C version 5. and Power Windows version 2. What I have been able to do is open a window with a custom screen. The piece of program I have in mind is open a customscreen, a window with a few lines of text, a project menu with a couple of read.me files; about 50 lines of words each controlled by the mouse button and keyboard.

Mr. J. Bradley, of 17 Sweethill Terr., Coatbridge, ML5 4S Lanarks., Scotland, writes asking for help with the following problem :

I came across a turbo program, for tape, in an old issue of Your Commodore. As well as loading at turbo speed it displays coloured bars. Looking through the assembly listing I found the command that switches the screen off or on. I changed the value but on loading my BASIC program I found after nine or ten lines the rest of the program was just garbage. After a think I decided it may be due to the timer. Looking again at the assembly list I found that the timer had a high and low byte. This gives a total number of 65535 (256 * 256) values that can be poked before I come across the correct value!

I think it much more interesting to have the screen on and displaying a picture rather than either a blank screen or coloured bars. Is there a quick way to find the correct value assuming that it is the timer? And is there any instructional material around to show one how to build a turbo loader with the screen on?

Alan Lewis of 30 Fd Sqn, BFPO 24, writes :

I have an A500 and Star LC-10 colour printer, and use Scribble! and Prowrite versions 1.11 and 2.02 wordprocessors. Although they all have their good and bad points, i.e. Scribble constantly losing documents, and Prowrite's spellchecker not finding mis-spelling, I cannot force any of them to accept printer commands. No matter whether I try to force them using command strings or, as imbedded commands, they are always ignored and do not affect the finished print of the document.

Secondly, although I usually use the NLQ option using Prowrite, I occasionally wish to produce a 'Standard' type print. However, this does not result in the desired finish. On alternate lines, the characters are of different heights. I have also noticed this when dumping art to the printer; it will overprint the bottom line of the line above, producing visible lines in a picture. Does anybody else experience this? Has anyone a solution? I use workbench 1.2 and the Epxon JX-80 driver, but have read in the Star manual that the machine can emulate the Epson LX-800 and IBM ProPrinter II. Does anyone have drivers for these machines? I have sent off for WB 1.3 hoping that the answer may lie there, but meanwhile any help would be appreciated!

In reference to Gary Haslem's article on price differences, members may be interested to know that there are not only price differences in products marked in different countries. I bought my printer in Germany, at a price around £75 cheaper than even the best discount I have seen in the UK. The manual was in German of course, but looked impressive. I duly sent

it to Star UK and asked for an English manual. I can only praise the speed with which it was sent, and have nothing but good to say about the standard of their customer relations. However, the English manual is by no means up to the standards of it's German cousin. It is half the thickness, with most of the explanatory listings omitted, and although it states certain things can be done with the printer, does not show how.

This is not the only case I have found where German branches are far more supportive than their UK cousins. When I bought my Commodore 128 there were three manuals. One detailing the use of CPM, one for BASIC 7 and BASIC 2, and one 'overall' manual. These I sent to Commodore UK asking for the English equivalents. FOUR MONTHS later the German Basics manual was returned with a note that I could obtain a 128 guide for £14 from some companies. I eventually bought one for £4.95 from a UK shop whilst on leave. It gave less that half the information contained in the German BASIC book.

Everyone can dig the Germans for not having a sense of humour, but no one can deny that they are certainly extremely thorough people, and I can only wish that I had photocopied all the manuals I had sent for replacement. With them and the English manuals I would be able to make all my machines perform instead of just work!

Another request. Does anyone have any experience of Datel's Deniscan GS4000 scanner? I use Dprint II to produce calendars, cards, notepaper, etc. for other Forces families, and incorporate pictures from art packages. Many 'customers' want to use their own photos in these designs, but I have no way of getting these images into my Amiga. The scanner looks ideal, but I want to know how good it is before I spend. Can it reproduce colour images in colour? Is the scan resolution adequate or does it produce lumpy images? Any information would be appreciated.

Ramsey MacLennan has already thanked Tony Wright for help with a printer problem, and wishes to also acknowledge help from Mr. J. E. Wilberforce of St. Helens.

Jill Dick, who appears in Super* Corner this issue, writes about Fontmaster.

'For a long time my C128 with Fontmaster 128 on a 1541 drive presented me with a wild flashing past of the yellow and brown grid picture while loading - and then all worked a treat. I sought Chris Wright's advice on why this flashing past happened and he said Don't worry. Wrong interface, but take no notice.

I continued happily. It's a marvellous program and I use it constantly for work and pleasure.

Then - with no change in my set-up and without warning - I must have caught a most felicitious virus. One day, during loading, the yellow and brown grid didn't flash past. It stood quite still and looked straight at me. And it has done so ever since.

It just goes to show that all viruses aren't bad. I don't want an expert to banish this one, thank you very much. I haven't the remotest idea why it suddenly arrived, but it's one I'm quite content to keep.

FOR SALE AND WANTED

Editors note: Copy for small advertisements (no more than six lines please) should be sent to John Bickerstaff (address inside front cover) to arrive no later than the last saturday of the month before the first month on the cover of the required issue! Yes, this is one week BEFORE the editorial copy date.

WANTED

WANTED: PET book, Software tape or ROM's i.e. Programming the PET/CBM by Rae West, Diagnostic ROM or Arrow tape etc. Contact Mr. Graham Mitchell, 43 Cranbrook Avenue, Odsal, Bradford, BD6 1JK (series 3032).

WANTED: 1571 Drive. Does not have to be in working order but would help. Tel 0382 505437 ask for Dave Thornton snr. if not at home, please leave your name and tel No. on answerphone.

WANTED: User's Manual for Commodore 1551 disk drive, or at least a copy to view for a short while. Also, disc version of the Trojan Cadmaster light pen and Calc Plus c/w instructions, all for the Plus/4. Phone Haywards Heath, W Sussex 0444/414352, most evenings.

WANTED: a copy of the instructions for the Currah speech cartridge for the CBM 64 willing to pay postage and other costs. Apply to John Walker, 14 Leamside, Leam Lane Estate, Gateshead, Tyne and Wear, NE10 8NT. Tel. 091-4690157.

WANTED: outgrown or unwanted business programs for the IBM PC with manuals. Also Joystick and mouse 061-962-3180 Manchester.

WANTED: 8032 or 8096 computer. Must be in excellent condition. S.A. Wright, 22 Crown Street, Mansfield, Notts. NG18 3JL. Phone 0623/29473 eves, weekends.

WANTED: Copy of Plus/4 & C16 ROM memory map. Memory location $8000-$FFF. Also copy of memory map of the Plus/4 3+1 w.p. Please contact J.Hadlow, c/o Showground, Buchan Park, Greendykes Road, Broxburn, W.Lothian, Scotland

WANTED: Copy of Repton 3 and instructions (tape version) for CBM64. Contact Nathaniel Virgo, The Beeches, The Street, North Lopham, Diss, IP22 2NB. Telephone Bressingham 696.

FOR SALE

FOR SALE: One 12" green screen monitor in good condition for £25. Phone Tony on 0904-424184.

FOR SALE: Green screen monitor + connector for 128 40/80 cols £45. Superscript 128 £10. Colossus IV chess £5. Scrabble Delux £5. Pocket Planner 128 £10. 1531 mouse £7. GEOS 128 £10. Telephone Andrew on 01-422 2036.

FOR SALE: Superbase 64 £10. Paperclip 64/128 (both versions on disk) £10. Word Perfect, Busicalc and Instant Recall, all for the 64, All 3 for £10, or £5 each. All originals with documents. Anirog's "Sprite Machine" 64 £5. Dave Thornton snr 0382 505437 , 24 hr.

FOR SALE: 14" high resolution Centronics professional monitor with RGB and sync inputs at TTL levels suitable for BBC etc as it stands. Also included is an adaptor for use with the C128 in the 80 column mode displaying all the colours. The bandwidth of this is 28 MHZ, original cost of monitor is well over £250. Priced at £120. Apply to John Walker, 14 Leamside, Leam Lane Estate, Gateshead, Tyne and Wear, NE10 8NT. Tel. 091-4690157.

FOR SALE: C64 "Superscript" disk with original manual £12; C64 "Superscript" disk (no manual) £8; C64 "Superbase" disk with original manual £15; "Superbase - The Book" £5; C64 "Easy Calc Result" cartridge £8. All in original packing, in excellent condition. Please phone to C. Furedi (0222) 753151, evenings or weekends.

FOR SALE: 3.5 inch external disk drive for Amiga 1000 £30. PC Sidecar (512k). £190. C Ltd fully populated 1 MEG expansion board for Amiga 1000. Gives total system memory of 1.5 MEGS. - £170. Tel Dr. R.Roberts 01-987 6894 (eve's) or 01-377 7000 x 2656 (day).

FOR SALE: PET 8032-SK Computer, 8050 dual disc drive, Epson LX80 Printer, and connecting cables, also the cassette player, discs and manuals. £350.00 the lot, or offers considered. Telephone Mr. N.Morgan (0792)872855 any time.

FOR SALE: C64, 1541 disk drive, C2N datasette, 12" Philips green screen monitor, Final cartridge II. Many boxed utilities and games on disk and cassette. 7 reference books, 30 unused disks, approx 20 other disks with more games/utilities, 2 years of C64 magazines. The lot £250 o.n.o. Contact Julian Brooks evenings 0788-813139.

FOR SALE: Commodore 128, 1701 Monitor, 1541 Disk Drive and MPS803 printer. Over 250 disks, many books & magazines, final cartridge. £500 the lot - will split. PET 4032, 4040 disk drive and 4023 printer, disks, books etc £100 the lot will split. M.A.H.Davies on Fleet (0252) 621033.

FOR SALE: Commodore 64 games, all originals and complete with instructions etc., some brand new. Also many books - all as new. Please send an S.A.E. for details to: Elaine Giles, 1 Parklands Drive, Sale, Cheshire. M33 4NE.

FOR SALE: Starboard 2 for A1000. Unpopulated. New and unused. £170. Phone (07714) 378 or write to Keith Hunter, Bruxie Cottage, Maud, Aberdeenshire AB4 8NY.

FOR SALE: Commodore 3032, double disk drive and 4022 printer together with a Coommodore Assembler and manual and a large quantity of software including a large Stock Control Database and Sales and Purchase Accounts Packages. Suggest £200 or reasonable offer to John Newey on 0384-54336/54610.

FOR SALE: Amiga 1000 with 1Meg Insider board, sidecar (512k RAM) Rendale A8802 Genlock plus software and manuals. Will split. Amiga programs - Pagesetter, Powerplay, World Games, Leisure Suit Larry, Guild of Thieves, Sinbad, Delux Print, Starfleet 1, F/S Scenery Disk 7, Leather Goddesses, Music Studio, Faccll, Silent Services, MarbleMadness, 7 Cities of Gold & Hollywood Poker. Call Tony Colwell (0226) 727337.

FOR SALE: Commodore 64 & 128 software. Titles include Oxford Pascal, Art Studio, Outrun, Beach Head II, Nebulus, Music Maker etc. Some titles on disk, some on tape. Also blank 5.25 inch discs and C-15 tapes. Send S.A.E. for list of over 50 original and boxed titles to I. Hawker, 1 Solway Place, Holm Street, Moffat, DG10 9EB.

FOR SALE: C-64 & 1530 Datasette plus Lots of books & Programmers Reference Guide - £65. 1581 3.5 inch Disk Drive in original box (with manual) - £95. 1520 Printer/Plotter plus Pens & 4

rolls of paper - £40. Compunet Modem. (1 year old, new type white box) - £25. All the above in excellent condition. Carriage included:- David Bousfield. West Hayes, Sheepscombe, Stroud, Glos, GL6 7RL. Tel (0452) 813336.

FOR SALE: All for 64. Video Digitizer (Used in the creation of ICPUG lib. graphics 4) £65. Doodle (Disk) £10. Glentop 3D Drawing Board (Disk) £10. Datel Toolkit IV (Disk) £6. Hesware Forth (Cart) £15. White Lightning (FORTH) & BASIC Lightning (Tapes) £10. Future Finance (Disk) £6. All software, manuals and makers boxes original on all items. Tel Mike Benn 059-12-242 daytime W/E.

FOR SALE: Commodore Amiga 500 and 1084 colour monitor with Extended memory to 1024K, Datel AX100 second drive and Star colour printer, plenty of disks over 100, a few manuals, mouse mat, cost £1360 but will sell for £950 O.N.O. Also Opus business computer desk £120. Contact N.Crimmings 15 Shelton Ave Warlingham Surrey CR3 9NF. Tel 08832 7152. Very Reluctant Sale.

FOR SALE: Large collection of AMIGA software, all originals boxed with instructions. Games, word processors, graphic and video programs. Send SSAE for list. WANTED: Amiga Maxiplan spreadsheet and Superbase database or similar programs. Details to: Keith Rodgers, 57 Fircroft Close, Tilehurst, Reading, RG3 6LJ .

FOR SALE: 1541 disk drive £70 (buyer to collect): 1571 fix ROM £10. David Hale, 22 Hill St., Rhisga, Gwent. NP1 6QH. 0633 619821.

FOR SALE: CBM 710 (256K), 8050 drive, 6400 daisy wheel printer with cables £150 the lot. Contact Joe Griffin, 040372 2382 (eves).

ICPUG SOFTWARE LIBRARIES

Organiser: Joe Griffin,Clovelly,Lynwick St,Rudgwick,Horsham, Sussex RH12 3DJ

Please remember that the Libraries are operated on an entirely voluntary basis and unlike many of the American User Groups, ICPUG DOES NOT CHARGE A COPYING FEE.

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Members may obtain ALL the library material. In order to retain a measure of control over the work-load imposed on the Copiers, however, we do restrict the amount of material which may be obtained from any one request.

Disk Users may obtain up to two disk copies at a time (Amiga: five).
Tape Users may obtain up to four programs, from any one disk.
(Please use a C-60 or C-90 tape; a C-15 or C-30 may be too short.)

For ALL libraries (except VIC) a catalogue disk is available, containing a list of the library contents. PRINTED CATALOGUES ARE NOT AVAILABLE.

To obtain copies of catalogue or library disks, please send :
A statement of what you want
Your membership number. (Requests without may be returned uncopied)
Disks (STATING format [type of drive] required) or Tape (C-60 or C-90)
We will NOT use a disk as a 'flippy' as it can damage the disk drive.
Pre-addressed re-usable packaging suitable for return
There have been occasions when disks have arrived bent in half!
Please ensure that the packing is adequate.
Return postage - SEND STAMPS.
Overseas members should send International Reply Coupons
(Allow Surface: 1.5 IRCs, Air: 2.5 IRCs per disk sent please).

PET Joe Griffin (see above)

VIC Tape & 1540/1541 Copies from David Miller (See C-64 library)
8050/8250 format only from Joe Griffin (see above)

COMAL Brian Grainger, 73 Minehead Way, Stevenage, Herts SG1 2HZ

1520 Plotter - W G C Austin, School of Geography, Faculty of Humanities, Newcastle Polytechnic, Lipman Building, Sandyford Road, Newcastle upon Tyne NE1 8ST

1520 (Tape): John Bentley, 38 Conway Road, Taplow, Maidenhead, SL6 0LD

PC Organiser: Don Skene, 307 Queen's Road Maidstone, Kent. ME16 0JN
Please send your requests to the copier listed below who deals with disks in your required format. Each librarian holds the complete catalogue disk in his own format.

360K Pete Crowder, 27 Crawford Drive, Liverpool. L15 8AE
720K David Harrow, 28 Phoenix Drive, Wateringbury, Maidstone. ME18 5DR
1.2M John Robinson, 5 Alba Close, Silica Lodge, Scunthorpe. DN17 2XD

Plus/4 & C-16 - Organiser: Richard Hunt 45 Cumberland Rd, Bromley, BR2 0PL
Send requests to the copier who deals with the first letter of your name.

A-M plus all tape requests - Richard Hunt (see above)
N-Z Joe Shirras, High View, 69 Ighten Road, Burnley, Lancs. BB12 0HP

C-64 Organiser: David Miller, 38 Exeter Gardens, Ilford, Essex IG1 3LB
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A-C Joe Quintin, 7 Cotterhall Ct,Clover Hill, Bowthorpe, Norwich NR5 9AZ
D-H R Burns, 48 Grasmere Road, Royton, Oldham, Lancs OL2 6SR
I-M James Mason, 35 Woodburn Drive, Dalkeith, Midlothian EH22 2AZ
N-R Norman Wright, 73 Queens Road, Littlestone, New Romney, TN28 8LS
S-Z M J Mann, 502 Dereham Road, Norwich, Norfolk NR5 8TU
Tape Joe Quintin (see above)
Overseas & 8050/8250 Joe Griffin - (see above)

128 Organiser: Chris Wright, 37 Cecil St., Lytham, Lancs. FY8 5NN
Send requests to the copier who deals with the first letter of your name.

A-C Bill Gardner, 156 Henwood Rd, Compton, Wolverhampton WV6 8PA
D-J Tom Nuttall, 43 Renshaw Drive, Bury, Lancs BL9 7NJ
K-R Robert Daly, 6 Derwent Crescent, Clitheroe Lancs BB7 2PW
S-Z Dave Tew, 4 Acombe Crescent, Hambrook Pk, Charlton Kings, Cheltenham, Glos GL52 6YH

Overseas (All) Derek Clifford, 36 Hanover Avenue, Feltham, TW13 4JW
1581 requests to Bob Daly (see above)
128 Bulletin Board on 0902-745337 (24 hrs) [Also for PC users]

Amiga - Organiser: Peter Miles, The Queens Armes Hotel, Charmouth, Dorset
Write to him with/about your programs.Disk copies should NOT be requested from the Organiser.

Amiga Disk Copiers: [Not more than 5 disks at one time] Specific ICPUG Disks and the catalogue of Read-Me files (ie contents) for these. Send your request to the copier below who deals with the first letter of your surname.

A-D David Annal, P.O. Box 42, London SW16 5HJ
E-K Peter Reeve, 2 Court Road, Tunbridge Wells, Kent TN4 8ED
L-R David Flint, 24 Hawthornden Avenue, Uttoxeter, Staffs ST14 7NZ
S-Z Chris Wright (see 128 above)

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- Amicus disks and the catalogue of Read-Me files (ie contents) for these may be obtained solely from:
Ken Turner, 9 Thirlmere Court Keswick Walk, Lancaster, Lancs. LA1 3LQ

- Fish disks and the catalogue of Read-Me files (ie contents) for these.
Please send your request to the copier listed below who deals with the first letter of your surname. (Catalogue now on 2 disks).

A-K Eddie Moore, 4 Gosling Close, Hatton, Warrington, Cheshire WA4 5PB
L-Z John Grove, The Cobnuts,Cobs Close, Ightham, Sevenoaks, TN15 9DB